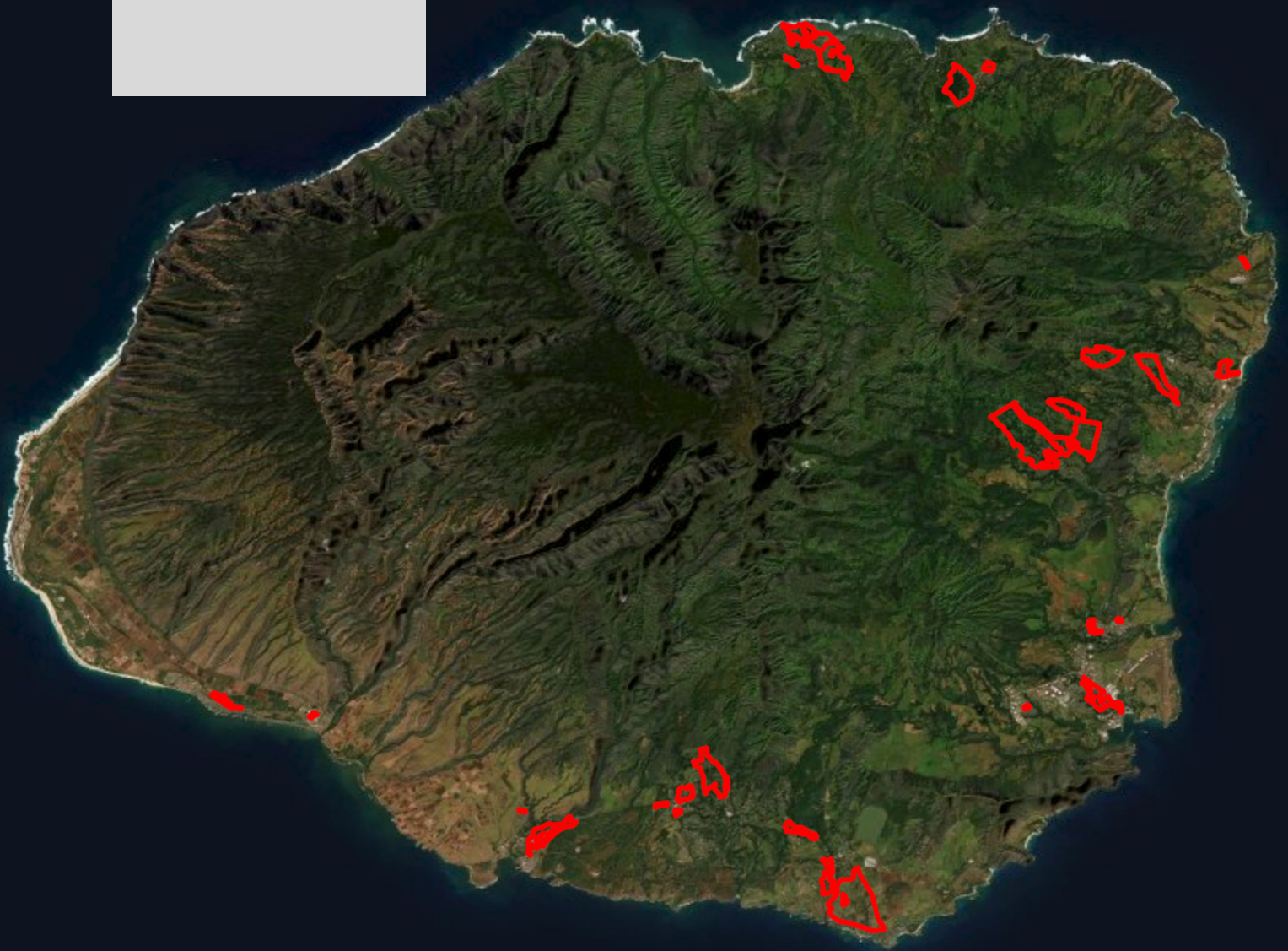


## KAUAI 2022 CASPER

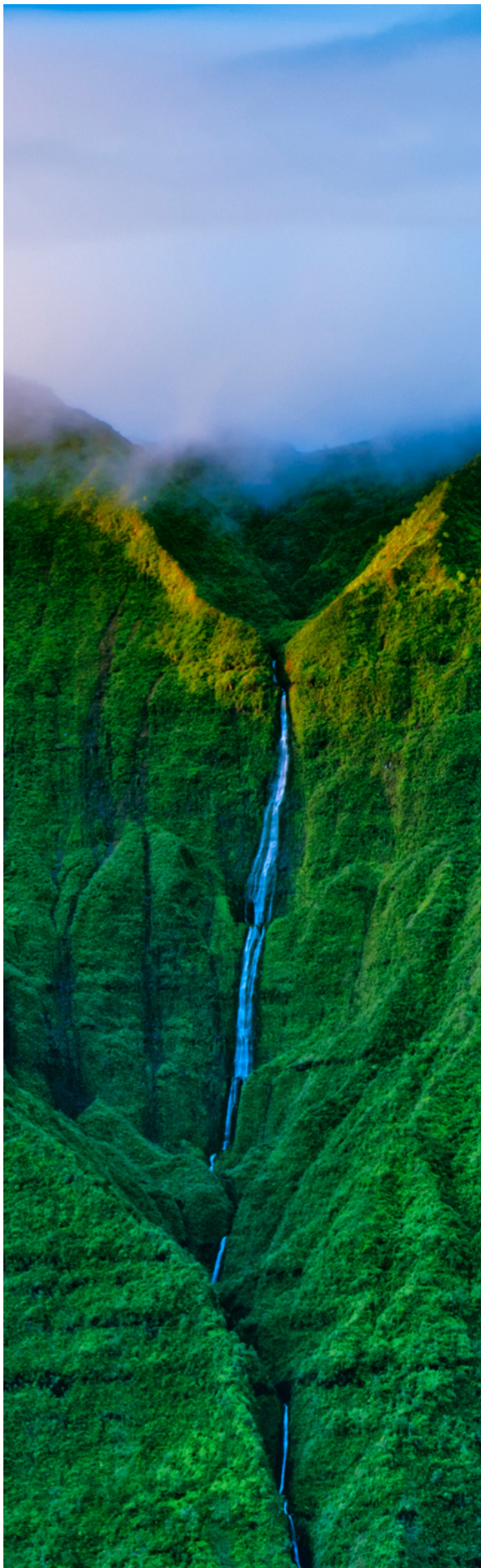
# FINAL REPORT

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Earthstar Geographics



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# INTRODUCTION

## Background

A community assessment for public health emergency response (CASPER) was conducted on Kauai in July 2022 by the Hawaii State Department of Health's Kauai District Health Office. CASPER is a validated two-stage cluster sampling methodology developed by the Centers for Disease Control and Prevention (CDC) to rapidly obtain information about the health and resource needs of a community. Information obtained is generalizable to the entire sampling frame, providing population-based estimates. This methodology is designed to be inexpensive, quick, and scalable, making it ideal for use in disasters.

CASPERs can also be used to establish baseline preparedness levels and build capacity to conduct CASPERs after a disaster. The Kauai District Health Office (KDHO) conducted CASPERs annually from 2017 - 2019 to monitor trends in the emergency preparedness of island residents. Through these efforts, over 60 KDHO staff and volunteers were trained in this rapid health needs assessment methodology. This resource was tapped in April 2020 to assess the early impacts of the pandemic on our community and identify any knowledge/resource gaps. The survey protocol was adapted to ensure the safety of surveyors and participants as well as compliance with physical distancing requirements. KDHO did not conduct a CASPER in 2021 due to all available resources being heavily invested in direct COVID response and vaccine rollout efforts.



## Objectives

In order to bridge this gap, Kauai's 2022 CASPER included an assessment of:

- 1) the ongoing impacts of the pandemic,
- 2) the community's perception of Kauai's COVID-19 response efforts,
- 3) COVID-19 vaccination status and perceptions, and
- 4) emergency preparedness and evacuation plans.

# METHODS

## CASPER Sampling Methodology

CASPER is a two-stage cluster sampling methodology. The first stage, cluster selection, begins with the determination of a sampling frame, or the area from which the sample is selected and to which the data is generalized. Once the sampling frame is determined, thirty census blocks (termed “clusters”), are randomly selected. The probability of a census block being selected is proportional to the number of housing units located within it.

The second stage of sampling, household selection, is usually completed by survey teams in the field. This stage involves systematic selection of seven households per cluster. Homes are selected by dividing the total number of housing units (occupied or total, depending on the sampling frame) in the cluster by seven (the target number of surveys per cluster) to determine each cluster’s sequence number (“n”). Survey teams then attempt to interview every “nth” house, with an ultimate target of 210 surveys (30 clusters x 7 surveys per cluster).

## 2022 Kauai CASPER Methodology

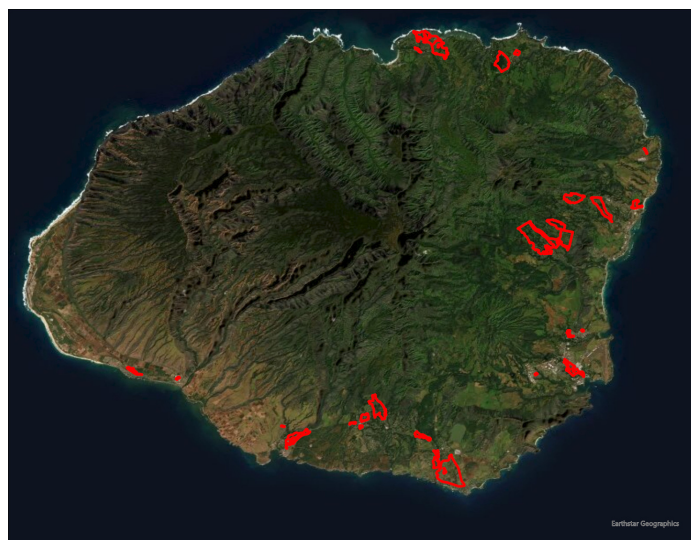
### *Cluster and Household Selection*

The sampling frame for this assessment was occupied housing units on the island of Kauai. 2020 census block data was used to select thirty clusters via random number generation. Kauai has a total of 1,344 census blocks, 30,157 housing units, 24,712 occupied housing units, and a population of approximately 73,000. As a major tourist destination, many housing units are not occupied by residents and are classified as “vacant” in census data. To better capture data representative of Kauai residents, cluster selection used occupied housing units rather than total housing units to reduce the likelihood of selecting clusters with primarily short-term vacation rentals, which aren't eligible for survey completion.

Census data, including census block GIS shape files, total population, total housing units, and occupied housing units (all per census block) were downloaded via the United States Census webpage. Using a random number generator between 1 and 24,712 (the total occupied households on the island), thirty households were selected, and corresponding census blocks were chosen as survey clusters. Selected cluster shapefiles were layered over Google Maps satellite images, as displayed in Figure 1.

Survey planners utilized satellite imagery and County of Kauai Real Property tax map data to pre-select households for participation. Within QGIS, random starting points were generated within each selected cluster. Researchers used these points, along with Kauai County tax parcel shapefiles, to enumerate housing units within each cluster. Counting sequences were calculated by dividing the number of census-block specific occupied housing units by seven (referred to as “n”).

Researchers continued through each cluster in a serpentine manner until seven participant households and five potential replacement households were selected. Survey teams were supplied with detailed maps of their cluster and their selected household addresses upon deployment. This methodology saved time in the field, ensured adherence to systematic household selection process, and improved efforts to include additional dwelling units (known as ohana units) that are typically hidden from street view, and often missed during field enumeration processes.



**Figure 1.** Satellite imagery of census blocks randomly selected for survey participation.

### *Questionnaire*

The 2022 Kauai CASPER questionnaire was developed by the Public Health Preparedness program of the Department of Health’s Kauai District Health office, with input from the Kauai District Health Officer, the Kauai Emergency Management Agency, and prior-year CASPER survey team feedback. Forms were not translated to other languages, but survey teams were instructed how to request interpreter services from the operations team. To streamline data collection, surveys were collected in the field on tablets using the EpiCollect5 application while households followed along on a paper-based version.

### *Training and Survey Teams*

Survey teams were comprised of Department of Health staff with support from the Kauai Medical Reserve Corps and American Red Cross. All team members were required to attend remote and just-in-time training prior to survey deployment. Teams were briefed on common safety and security issues and were provided with an interview tip sheet and COVID-19 safety protocol developed by survey planners (Appendices E and F). Teams were paired so that each team had at least one member with prior CASPER experience and familiarity with the assigned cluster area. While surveying, teams drove state vehicles with clearly visible decals, wore green vests identifying them as members of the “Department of Health Survey Team” and had visible state-issued ID badges.



Community Notification

Numerous methods were utilized to notify the public of the 2022 CASPER survey, including a Hawaii Department of Health (HDOH) press release, radio advertisements on two stations, and County of Kauai social media postings. Notifications began two weeks prior to deployment to provide ample community notice. All communication emphasized the ability for selected households to participate in a socially distanced outdoor interview or to complete the survey over the phone.

Survey Implementation

From July 26-30, a total of twenty-four survey teams conducted door-to-door surveys in the thirty randomly selected clusters. Teams were given a detailed map and list of the systematically selected households, a verbal informed consent script, a cluster-specific tracking sheet, referral forms, extra paper-based questionnaire forms, a copy of the press release describing the survey's objectives, and a tablet to collect electronic data. Copies of all documents were available for household distribution upon request and are provided in Appendices A-G. To be eligible to participate, respondents had to provide verbal consent, reside on the island at least four months per year, and be 18 or over.

Survey teams wearing face masks knocked on doors, backed up six feet, and obtained verbal consent from the household. Selected households were offered the opportunity to participate in a socially distanced outdoor interview or a phone interview. Each survey team was assigned a burner phone to complete surveys from the car, if preferred, after obtaining verbal consent from the household. For households who weren't home, survey teams dropped off letters after the initial visit with instructions to call the survey team back to conduct their interview via phone or to decline to participate (Appendix D).

Participating households were provided drawstring backpacks, first aid kits, flashlights, COVID-19 over-the-counter antigen tests, waterproof bags for storage of important documents and educational materials on COVID-19, monkeypox, and emergency preparedness (Figure 2). Households that declined to participate in the survey still received the waterproof bags for important document storage and all educational materials.



Figure 2. Materials provided to participating households by survey teams.

Data Entry and Analysis

Survey data were collected electronically via tablets using the EpiCollect 5 application. Entries were uploaded upon return to the operations center. The data cleaning and analysis were done using SAS 9.4 (SAS Institute Inc., Cary, NC, USA) and Epi Info 7.2 (Centers for Disease Control and Prevention). During analysis, each completed interview was assigned a weight based on the likelihood that household would have been selected for participation. Weighting each interview ensures the data is representative of the entire sampling frame, and results can be generalized to the island of Kauai.

RESULTS

In the thirty clusters, survey teams attempted to contact 338 households, spoke with a resident at 228 households, and ultimately completed a total of 176 interviews. Response rates are shown in Table 1, which also includes response rates from the 2017-2020 CASPERs.

Table 1. Calculated response rates for the 2022 (n=176), 2020 (n=189), 2019 (n=186), 2018 (n=190), and 2017 (n=186) CASPERs.

Response Rates		2022 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)
Completion Rate	Represents percent of target number of surveys collected  (completed surveys / target surveys)	83.8	90.0	88.6	90.5	88.6
Cooperation Rate	Represents the willingness of the community to participate  (completed surveys / total contacted households)	77.2	89.2	78.5	63.1	71.8
Contact Rate	Represents the proportion of households where contact was attempted and interview completed  (completed surveys / total attempted households)	52.1	69.7	55.9	46.0	48.6

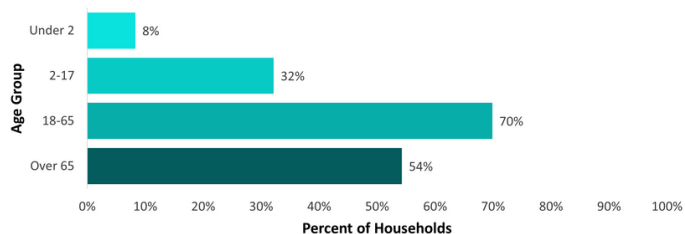
Translation services were available to teams by request. In 2022, this service was used for one household. Operations deployed a new survey team with that language capability on the same day so that the survey could be completed in the household's primary language. Referral forms were completed for seven households who had immediate needs and shared with the appropriate county/state department for response. Survey results are grouped by subject matter and summarized in data figures and tables on the following pages.

Weighted data with 95% confidence intervals are provided for responses with frequencies greater than or equal to 5. Comparison data from the 2017-2020 Kauai CASPERs is also included, where the questions were repeated across years. 95% confidence intervals are not available for 2018 data. Weighted percentages for each year were compared to prior years using 95% confidence intervals and statistically significant differences are represented by an asterisk.

## Basic Household Information

All Kauai CASPER surveys begin by asking basic household information. In 2022, the majority of Kauai households were owner-occupied (74%), with a mean and median household size of 3 (95% CI [2.79, 3.44]) and 2 (95% CI [1.77, 1.94]), respectively. Just over 1% of households had a member who was pregnant and 2% of households had a member who did not speak English. Of those households with adults who did not speak English, the most common languages identified were Tagalog and Ilokano.

Given the vulnerability of certain age groups during disaster events and to many diseases (e.g. COVID-19), surveyors asked about the ages of household members. 8% of Kauai households had at least one child under two years old and 54% of households had at least one adult over sixty-five years old (Figure 3).

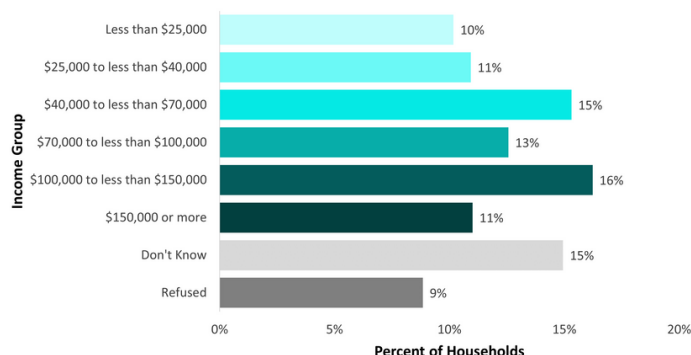


**Figure 3.** Percent of Kauai households with a household member(s) in each age group (n=176).

**Table 2.** Kauai 2022 CASPER basic household information survey questions with unweighted and weighted 2022 results (n=176) with results from 2020 (n=189), 2019 (n=186), 2018 (n=190) and 2017 (n=186) for comparison. Weighted data for answer choices with less than five respondents are represented by a (-).

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Basic Household Information</b>								
<b>Does your household own or rent this residence?</b>								
Own	130	73.9	18232	73.8 (63.5, 84.1)	69.0 (60.3, 77.6)	70.4 (60.8, 80.1)	66.5	68.0 (58.7, 77.3)
Rent	44	25.0	6205	25.1 (14.9, 35.3)	29.6 (20.9, 38.3)	26.7 (17.7, 35.7)	31.5	30.0 (20.6, 39.5)
Other	2	1.1	-	-	-	-	-	-
Don't know	0	0.0	-	-	-	-	-	-
<b>Is anyone in your household pregnant?</b>								
Yes	3	1.7	-	-	-	-	-	-
No	171	97.2	24037	97.3 (94.9, 99.6)	98.1 (96.3, 99.9)	97.4 (95.2, 99.6)	97.9	97.6 (95.2, 100.0)
Don't know	2	1.1	-	-	-	-	-	-

Hawaii is an expensive place to live. The median home price on Kauai in 2022 was \$1,200,000<sup>8</sup>. Many households live paycheck to paycheck during normal times and are, therefore, extremely vulnerable to financial insecurity during a disaster. To assess financial vulnerability among residents, surveyors asked households to select a range for their 2021 combined household income. 21% of households indicated they made less than \$40,000 before taxes in 2021 (Figure 4). The 138% federal poverty line for a Hawaii family of 3, which is often used to determine eligibility for various federal and state assistance programs, is \$36,556 for 2022.<sup>7</sup>



**Figure 4.** Percent of Kauai households within each 2021 combined household income range (n=176).



Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Basic Household Information</b>								
<b>Is there an adult in your household who does not speak English?</b>								
Yes	6	3.4	900	3.6 (0.4, 6.9)	-	-	-	-
No	170	96.6	23812	96.4 (93.1, 99.6)	97.9 (94.7, 100.0)	98.0 (96.1, 99.9)	98.6	98.5 (96.8, 100.0)
<b>Which range best describes your annual household income from all sources (before taxes) in 2021?</b>								
Less than \$25,000	18	10.2	2514	10.2 (4.8, 15.5)	7.0 (1.9, 12.2)	12.4 (6.4, 18.4)	NA	N/A
\$25,000 to less than \$40,000	18	10.2	2701	10.9 (6.0, 15.8)	12.1 (6.6, 17.7)	10.5 (5.3, 15.7)	NA	N/A
\$40,000 to less than \$70,000	27	15.3	3783	15.3 (9.9, 20.7)	18.3 (12.4, 24.1)	17.9 (11.7, 24.0)	NA	N/A
\$70,000 to less than \$100,000	24	13.6	3105	12.6 (8.0, 17.1)	20.9 (14.4, 27.4)	12.6 (7.4, 17.8)	NA	N/A
\$100,000 to less than \$150,000	29	16.5	4011	16.2 (9.2, 23.2)	13.1 (8.9, 17.3)	8.5 (4.3, 12.8)	NA	N/A
\$150,000 or more	18	10.2	2720	11.0 (4.4, 17.6)	9.1 (3.2, 15.1)	6.4 (2.3, 10.5)	NA	N/A
Don't know	26	14.8	3693	14.9 (9.1, 20.8)	9.6 (5.2, 13.9)	16.6 (9.4, 23.8)	NA	N/A
Refused	16	9.1	2185	8.8 (4.7, 13.0)	9.9 (5.6, 14.3)	15.1 (9.0, 21.2)	NA	N/A
<b>Percentage of households with at least one member in each age range</b>								
Less than 2 years old	15	8.5	2048	8.3 (4.2, 12.4)	7.1 (3.2, 11.0)	5.4 (2.0, 8.8)	NA	9.2 (4.7, 13.8)
Between 2-17 years old	58	33.0	7947	32.2 (23.2, 41.1)	33.9 (25.5, 42.2)	26.2 (19.9, 32.4)	NA	26.4 (18.8, 34.1)
Between 18-65 years old	124	70.5	17267	69.9 (60.0, 79.8)	80.1 (73.7, 86.5)	80.9 (73.8, 87.9)	NA	69.2 (59.7, 78.9)
More than 65 years old	94	53.4	13413	54.3 (44.6, 64.0)	41.5 (33.2, 49.7)	41.3 (32.9, 49.7)	NA	55.3 (46.5, 64.0)

## Emergency Preparedness

In 2017, the Hawaii Emergency Management Agency increased the recommendation from a 7-day to a 14-day supply of food, water, and medication for all households. To better understand household preparedness and resource gaps, households were asked questions about their emergency supplies and assistance needs. 24% of households indicated that they have at least one family member who requires some kind of assistance during an emergency, such as: ADA accessible accommodations, refrigeration for essential medication, electricity for a medical device, caregiving assistance for a disability or illness, paratransit service, and/or hospital/home care bed. 15% of these households reported that they are unprepared to care for these household members during an emergency.

The majority of Kauai households (78%) had some level of emergency supply kit, including food, water, flashlights, extra batteries and other preparedness materials. Further, 85% of households had a first aid kit, 33% had an emergency generator, and 54% had an emergency radio.

Prescription medication (if applicable), nonperishable food, and water supplies were assessed to determine the current readiness of Kauai households.

63% of Kauai households had at least one household member requiring daily prescription medication; 95% of those households had a seven day supply and 88% had a fourteen-day supply. 90% of households had enough non-perishable food for the next three days, 67% for the next seven days, and 42% for the next fourteen days. Assuming one gallon per person per day, 68% of Kauai households had enough water stored for three days, 45% for seven days, and 23% for fourteen days.

On Kauai, only 16% of households have the recommended fourteen day supply of both food and water.

When asked about the main barrier to assembling an emergency kit, 76% of Kauai households indicated they face no barriers. However, for the remaining 24% of households, barriers included: cost (6%), lack of storage space (7%), lack of knowledge regarding what is needed in a kit (5%), and lack of time to shop for and assemble a kit (2%). 3% of Kauai households were not able to identify their main barrier to assembling an emergency kit.

**Table 3.** Kauai 2022 CASPER emergency special assistance and supplies survey questions with unweighted and weighted 2022 results (n=176) with results from 2019 (n=186), 2018 (n=190) and 2017 (n=186) for comparison.

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Emergency Special Assistance</b>								
<b>Does anyone in your household require the following assistance during an emergency?</b>								
ADA accessible accommodations	14	8.0	2016	8.2 (3.9, 12.4)	N/A	6.3 (1.7, 10.9)	NA	N/A
Refrigeration for essential medication	16	9.1	2322	9.2 (4.9, 13.4)	N/A	5.8 (1.9, 9.7)	8.4	8.0 (3.6, 12.4)
Electricity for a medical device	16	9.1	2322	9.4 (4.4, 14.4)	N/A	5.5 (2.1, 8.9)	NA	N/A
Caregiving assistance for a disability or illness	13	7.4	1791	5.6 (2.1, 9.1)	N/A	5.5 (1.1, 9.8)	NA	N/A
Paratransit service	6	3.4	765	2.1 (0.1, 4.1)	N/A	2.7 (0.3, 5.2)	NA	N/A
Hospital/home care bed	4	2.3	510	2.1 (0.0, 4.7)	N/A	-	NA	N/A
None of the above	134	76.1	18748	75.9 (69.0, 82.7)	N/A	83.5 (77.4, 89.6)	NA	N/A



Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI	
Emergency Special Assistance									
How prepared is your household to care for such member(s) during an emergency?									
Very prepared	19	46.3	2760	47.2 (31.0, 63.4)	N/A	52.9 (31.7, 74.1)	NA	N/A	
Somewhat prepared	13	31.7	1832	31.3 (15.9, 46.8)	N/A	35.6 (11.4, 59.7)	NA	N/A	
Not prepared	6	14.6	902	15.4 (3.0, 27.9)	N/A	-	NA	N/A	
Don't know	3	7.3	-	-	N/A	-	NA	N/A	
Emergency Supplies									
Does your household have the following emergency supplies:									
An emergency supply kit (water, food, flashlights, extra batteries, etc.)	Yes	132	75.0	19148	77.5 (69.8, 85.2)	N/A	79.4 (72.9, 86.0)	79.3	N/A
	No	41	23.3	5191	21.0 (13.4, 28.6)	N/A	18.6 (12.0, 25.2)	20.3	N/A
	Don't know	2	1.1	-	-	N/A	-	-	N/A
	Refused	1	0.6	-	-	N/A	-	-	N/A
A first aid kit	Yes	148	84.1	21050	85.2 (80.3, 90.0)	N/A	86.9 (81.2, 92.6)	85.9	N/A
	No	27	15.3	3456	14.0 (9.1, 18.9)	N/A	10.9 (5.5, 16.4)	13.5	N/A
	Don't know	1	0.6	-	-	N/A	-	-	N/A
An emergency generator	Yes	58	33.0	8061	32.6 (22.6, 42.6)	N/A	34.3 (26.5, 42.1)	29.3	N/A
	No	118	67.1	16651	67.4 (57.4, 77.4)	N/A	60.4 (51.6, 69.3)	66.9	N/A
	Don't know	0	0.0	-	-	N/A	5.3 (1.2, 9.3)	3.8	N/A
An emergency radio	Yes	93	52.8	13288	53.8 (45.2, 62.3)	N/A	57.2 (51.4, 63.1)	N/A	N/A
	No	81	46.0	11169	45.2 (36.9, 53.5)	N/A	40.3 (34.5, 46.0)	N/A	N/A
	Don't know	2	1.1	-	-	N/A	-	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Emergency Supplies</b>								
<b>Do you or any of your household members require daily prescription medication?</b>								
Yes	113	64.2	15678	63.4 (55.1, 71.8)	N/A	60.8 (51.8, 69.8)	64.1	63.4 (56.9, 69.9)
No	61	34.7	8798	35.6 (27.3, 43.9)	N/A	37.5 (28.6, 46.4)	35.4	36.1 (29.4, 42.8)
Don't Know	1	0.6	-	-	N/A	-	-	-
Refused	1	0.6	-	-	N/A	-	-	-
<b>If yes, does your household have enough supply for the next:</b>								
7 days								
Yes	107	94.7	14845	94.7 (90.6, 98.8)	N/A	93.5 (87.2, 99.8)	N/A	91.3 (85.2, 97.4)
No	5	4.4	628	4.0 (0.6, 7.4)	N/A	-	N/A	8.1 (2.3, 13.9)
Don't Know	1	0.9	-	-	N/A	-	N/A	-
14 days								
Yes	98	86.7	13786	87.9 (81.8, 94.1)	N/A	80.2 (68.7, 91.7)	N/A	78.0 (70.2, 85.7)
No	12	10.6	1451	9.3 (4.3, 14.2)	N/A	14.6 (6.8, 22.3)	N/A	22.0 (14.3, 29.8)
Don't Know	3	2.7	-	-	N/A	-	N/A	-
<b>Does your household currently have enough water stored for the next:</b>								
3 days								
Yes	120	68.2	16857	68.2 (62.1, 74.3)	N/A	76.0 (68.7, 83.3)	74.0	72.8 (64.7, 80.8)
No	54	30.7	7572	30.6 (24.3, 37.0)	N/A	23.4 (16.2, 30.5)	25.1	26.7 (18.9, 34.4)
Don't Know	2	1.1	-	-	N/A	-	-	-
7 days								
Yes	78	44.3	11118	45.0 (36.5, 53.4)	N/A	48.3 (40.2, 56.4)	41.5	41.2 (34.0, 48.5)
No	93	52.8	12762	51.6 (43.0, 60.3)	N/A	50.5 (43.1, 57.8)	57.0	58.8 (51.5, 66.0)



Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Emergency Supplies</b>								
14 days								
Yes	40	22.7	5750	23.3 (16.5, 30.0)	N/A	27.9 (20.9, 34.9)	20.2	20.0 (14.2, 25.7)
No	126	71.6	17406	70.4 (62.9, 78.0)	N/A	70.0 (63.2, 76.9)	76.7	80.0 (74.3, 85.8)
Don't Know	10	5.7	1555	6.3 (2.0, 10.6)	N/A	-	3.1	-
<b>Does your household currently have enough non-perishable food stored for the next:</b>								
3 days								
Yes	156	88.6	22231	90.0 (84.5, 95.4)	N/A	90.3 (85.3, 95.4)	91.6	90.0 (85.6, 94.4)
No	20	11.4	2481	10.0 (4.6, 15.5)	N/A	9.2 (4.3, 14.1)	8.4	9.5 (5.1, 13.9)
Don't Know	0	0.0	-	-	N/A	-	-	-
7 days								
Yes	114	64.8	16543	66.9 (58.9, 75.0)	N/A	73.6 (67.2, 80.1)	72.4	69.7 (62.7, 76.6)
No	54	30.7	7072	28.6 (21.0, 36.3)	N/A	24.8 (18.9, 30.8)	24.7	29.8 (23.0, 36.7)
Don't Know	8	4.5	1096	4.4 (1.3, 7.6)	N/A	-	-	-
14 days								
Yes	71	40.3	10289	41.6 (32.3, 51.0)	N/A	44.3 (38.6, 50.1)	41.0	34.1 (27.7, 40.5)
No	92	52.3	12611	51.0 (42.7, 59.4)	N/A	52.1 (46.6, 57.5)	54.8	64.9 (58.7, 71.2)
Don't Know	13	7.4	1812	7.3 (3.1, 11.5)	N/A	3.6 (1.1, 6.1)	-	-

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Emergency Supplies</b>								
<b>What main barrier does your household face in assembling an emergency kit?</b>								
No barrier (kit assembled)	86	48.9	12466	50.4 (40.3, 60.6)	N/A	41.4 (32.0, 50.8)	43.9	N/A
No barrier (household hasn't gotten around to it)	48	27.3	6286	25.4 (17.9, 33.0)	N/A	24.8 (15.6, 34.1)	10.8	N/A
Cost of assembling kit	11	6.3	1442	5.8 (1.4, 10.2)	N/A	7.7 (3.5, 11.9)	10.8	N/A
Lack of storage space for kit	12	6.8	1818	7.4 (2.2, 12.6)	N/A	7.2 (2.4, 11.9)	14.4	N/A
Lack of knowledge regarding what is needed in a kit	8	4.6	1232	5.0 (1.6, 8.3)	N/A	5.7 (2.8, 8.6)	5.9	N/A
Lack of time to shop for/assemble a kit	4	2.3	-	-	N/A	4.9 (1.2, 8.7)	17.1	N/A
Other	2	1.1	-	-	N/A	-	-	N/A
Don't know	5	2.8	696	2.8 (0.0, 5.7)	N/A	7.8 (3.0, 12.6)	6.6	N/A

## Evacuation Plans

In order to inform county and state disaster planning efforts, households were asked questions regarding their evacuation plans for various types of hazards.

While the majority of Kauai households had important documents in a safe location (75%), only about half of Kauai households had disaster communications plans (57%) or a designated meeting place immediately outside or close by their home in the event of an emergency (51%).

More than half of households (62%) indicated that they faced no barriers to emergency evacuation if advised to do so by county officials. The remaining households identified the following barriers: uncertainty about where to go (11%), concern about leaving pets (8%), and concern about leaving property vacant (4%).

To better understand resident plans for hurricane sheltering, surveyors asked households where they would seek shelter for each category of storm. Shelter locations and household distributions are provided in Table 4 and further detailed in Figures 9 A and B.

Common "other" answers for shelter locations included evacuating to a second home and leaving the island. 62% of Kauai households had hurricane/high wind insurance, while 24% were unsure.

When asked what course of action they would take in the event of a tsunami warning being issued while located in a tsunami evacuation zone, the majority of households said they would evacuate inland to higher ground (89%). The remaining 11% said they would ignore the evacuation order (3%), didn't know what they would do (4%), or answered "other" (4%). 28% of households were not familiar with tsunami evacuation zones on Kauai. Half (49%) of those also did not know where to find that information.

Just over 67% of Kauai households had someone who had signed up to receive weather and other disaster-related alerts. 56% of households were familiar with the Kauai Emergency Management Agency's website to access materials to better prepare for emergencies.





**Table 4.** Kauai 2022 CASPER emergency plans survey questions with unweighted and weighted 2022 results (n=176) with results from 2019 (n=186), 2018 (n=190) and 2017 (n=186) for comparison.

Question		Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
Evacuation Plans									
Does your household have the following emergency plans:									
Communication plan (i.e. a list of numbers and designated out-of-town contact)	Yes	101	57.4	14002	56.7 (49.2, 64.1)	N/A	62.1 (54.2, 70.0)	59.5	62.6 (56.8, 68.5)
	No	73	41.5	10367	42.0 (35.0, 48.9)	N/A	35.4 (27.5, 43.4)	39.4	35.8 (30.3, 41.2)
	Don't know	2	1.1	-	-	N/A	2.5 (0.4, 4.6)	-	-
Designated meeting place immediately outside or close by your home	Yes	88	50.0	12699	51.4 (42.5, 60.3)	N/A	48.0 (40.4, 55.6)	50.9	52.4 (43.4, 61.4)
	No	82	46.6	11220	45.4 (35.9, 54.9)	N/A	50.6 (43.0, 58.1)	48.2	47.1 (38.3, 56.0)
	Don't know	6	3.4	792	3.2 (0.3, 6.2)	N/A	-	-	-
Copies of important documents in a safe location (i.e. water proof container)	Yes	135	76.7	18585	75.2 (66.3, 84.1)	N/A	68.6 (62.2, 75.1)	68.7	71.9 (64.7, 79.1)
	No	37	21.0	5548	22.5 (13.4, 31.5)	N/A	26.4 (19.4, 33.4)	29.9	26.5 (19.9, 33.0)
	Don't know	4	2.3	-	-	N/A	5.0 (2.0, 8.0)	-	-
What main barrier might prevent your household from evacuating when asked to do so?									
No barrier (would evacuate)		86	48.9	12211	49.4 (41.0, 57.8)	N/A	48.4 (39.5, 57.3)	38.2 †	N/A
No barrier (would not evacuate)		23	13.1	3134	12.7 (7.3, 18.0)	N/A	10.0 (5.6, 14.3)		N/A
Concern about leaving property vacant		6	3.4	883	3.6 (0.0, 7.6)	N/A	8.3 (4.0, 12.6)	15.4	N/A
Lack of transportation		4	2.3	-	-	N/A	-	-	N/A
Uncertainty about where to go		19	10.8	2791	11.3 (6.5, 16.1)	N/A	7.4 (4.3, 10.6)	10.5	N/A
Health or mobility issues		2	1.1	-	-	N/A	2.6 (0.0, 5.2)	3.9	N/A
Concern about leaving pet(s)		14	8.0	1936	7.8 (3.2, 12.4)	N/A	13.8 (8.5, 19.1)	9.7	N/A
Inconvenient or expensive		3	1.7	-	-	N/A	-	-	N/A

† No barrier (would evacuate) and no barrier (would not evacuate) were not offered as separate answer choices in 2018.

Question		Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
Evacuation Plans									
Other		9	5.1	1059	4.3 (0.5, 8.0)	N/A	-	-	N/A
Don't Know		10	5.7	1485	6.0 (2.2, 9.8)	N/A	4.3 (0.6, 7.9)	3.1	N/A
If Kauai was threatened by a hurricane, where would your household seek shelter for each category of storm?									
Category 1	Shelter in place	143	81.3	20129	81.5 (74.7, 88.2)	N/A	74.7 (67.0, 82.3)	N/A	N/A
	Friend/family home	13	7.4	2036	8.2 (4.0, 12.5)	N/A	9.7 (4.8, 14.6)	N/A	N/A
	Public shelter	13	7.4	1616	6.5 (2.5, 10.6)	N/A	9.7 (5.3, 14.1)	N/A	N/A
	Other	1	0.6	-	-	N/A	3.7 (0.8, 6.6)	N/A	N/A
	Don't know	6	3.4	814	3.3 (0.7, 5.9)	N/A	-	N/A	N/A
Category 2	Shelter in place	126	71.6	17865	72.3 (64.0, 80.6)	N/A	63.8 (54.3, 73.3)	N/A	N/A
	Friend/family home	18	10.2	2710	11.0 (5.0, 17.0)	N/A	12.9 (7.6, 18.3)	N/A	N/A
	Public shelter	21	11.9	2646	10.7 (6.1, 15.3)	N/A	15.1 (9.2, 21.0)	N/A	N/A
	Other	3	1.7	-	-	N/A	4.9 (1.3, 8.5)	N/A	N/A
	Don't know	8	4.6	1138	4.6 (1.6, 7.6)	N/A	3.2 (0.4, 6.1)	N/A	N/A
Category 3	Shelter in place	101	57.4	14358	58.1 (50.7, 65.5)	N/A	47.9 (37.6, 58.3)	N/A	N/A
	Friend/family home	24	13.6	3571	14.5 (8.7, 20.2)	N/A	17.8 (12.2, 23.3)	N/A	N/A
	Public shelter	35	19.9	4772	19.3 (13.7, 24.9)	N/A	22.2 (14.3, 30.0)	N/A	N/A
	Other	4	2.3	-	-	N/A	4.7 (1.2, 8.2)	N/A	N/A
	Don't know	12	6.8	1540	6.2 (2.4, 10.1)	N/A	7.4 (3.8, 11.0)	N/A	N/A

Question		Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
Evacuation Plans									
Category 4	Shelter in place	85	48.3	12211	49.4 (41.6, 57.2)	N/A	40.3 (30.2, 50.3)	N/A	N/A
	Friend/family home	27	15.3	3944	16.0 (10.4, 21.5)	N/A	16.8 (11.1, 22.5)	N/A	N/A
	Public shelter	47	26.7	6341	25.7 (18.1, 33.3)	N/A	30.8 (22.8, 38.8)	N/A	N/A
	Other	4	2.3	-	-	N/A	5.3 (1.7, 8.8)	N/A	N/A
	Don't know	13	7.4	1746	7.1 (3.6, 10.6)	N/A	6.9 (3.2, 10.5)	N/A	N/A
Category 5	Shelter in place	74	42.1	10624	43.0 (33.4, 52.6)	N/A	32.2 (24.5, 39.9)	N/A	N/A
	Friend/family home	28	15.9	4130	16.7 (11.0, 22.4)	N/A	16.4 (10.7, 22.0)	N/A	N/A
	Public shelter	50	28.4	6782	27.4 (19.8, 35.1)	N/A	37.2 (29.0, 45.3)	N/A	N/A
	Other	5	2.8	588	2.4 (0.4, 4.4)	N/A	5.8 (2.2, 9.4)	N/A	N/A
	Don't know	19	10.8	2587	10.5 (5.5, 15.4)	N/A	8.5 (4.8, 12.1)	N/A	N/A
Does your household have hurricane / high wind insurance?									
Yes		110	62.5	15394	62.3 (51.7, 72.9)	N/A	65.3 (56.1, 74.5)	65.0	N/A
No		25	14.2	3409	13.8 (6.9, 20.7)	N/A	12.7 (6.3, 19.0)	17.1	N/A
Don't Know		41	23.3	5909	23.9 (16.3, 31.5)	N/A	22.0 (14.9, 29.1)	17.9	N/A
For many tsunami events, officials may not be able to open tsunami refuge areas or evacuation shelters. If you are in a tsunami evacuation zone when a tsunami warning is issued, what action would you take?									
Evacuate inland to higher ground		156	88.6	21992	89.0 (82.8, 95.2)	N/A	N/A	N/A	N/A
Ignore evacuation order		6	3.4	832	3.4 (0.3, 6.4)	N/A	N/A	N/A	N/A
Other		7	4.0	890	3.6 (0.1, 7.1)	N/A	N/A	N/A	N/A
Don't Know		7	4.0	998	4.0 (0.7, 7.3)	N/A	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Evacuation Plans</b>								
<b>Are you familiar with the tsunami evacuation zones on Kauai?</b>								
Yes	123	69.9	17281	69.9 (63.1, 76.7)	N/A	N/A	N/A	N/A
No	49	27.8	6872	27.8 (22.1, 33.6)	N/A	N/A	N/A	N/A
Don't Know	4	2.3	-	-	N/A	N/A	N/A	N/A
<b>If no, do you know where to find that information?</b>								
Yes	24	45.3	3311	44.6 (28.7, 60.4)	N/A	N/A	N/A	N/A
No	25	47.2	3603	48.5 (31.5, 65.4)	N/A	N/A	N/A	N/A
Don't Know	3	5.7	-	-	N/A	N/A	N/A	N/A
Refused	1	1.9	-	-	N/A	N/A	N/A	N/A
<b>Have you or anyone in your household signed up to receive weather and other disaster-related alerts?</b>								
Yes	118	67.1	16586	67.1 (58.7, 75.5)	N/A	70.2 (61.2, 79.1)	61.7	65.1 (55.2, 75.0)
No	49	27.8	6757	27.3 (19.8, 34.9)	N/A	24.2 (15.6, 32.9)	35.9	32.3 (23.0, 41.7)
Don't Know	9	5.1	1369	5.5 (1.7, 9.4)	N/A	5.6 (2.2, 9.0)	2.4	-
<b>Is your household familiar with the Kauai Emergency Management Agency's website where you can access materials to better prepare for emergencies?</b>								
Yes	99	56.3	13870	56.1* (47.9, 64.3)	80.1* (73.9, 86.4)	49.3* (42.3, 56.3)	31.0	34.0 (27.2, 40.8)
No	70	39.8	9844	39.8* (31.5, 48.2)	19.8* (13.6, 26.1)	46.7* (39.0, 54.4)	67.1	63.9 (56.3, 71.4)
Don't Know	7	4.0	998	4.0 (1.2, 6.9)	-	4.0 (0.6, 7.4)	-	-

\*Represents a statistically significant difference between a weighted percentage for a year and the most recent year.



## Impacts of COVID-19

The 2020 COVID-19 CASPER made an early attempt to assess the financial and mental health impacts of the pandemic on Kauai households. The 2022 CASPER collected additional data on how households were faring almost two and half years later.

The majority (69%) of Kauai households remain very concerned or somewhat concerned about their household members getting sick with COVID-19, unchanged from 70% in April 2020.

The percentage of households reporting having experienced emotional distress related to the pandemic rose slightly from 32% in April 2020 to 36% in August 2022. This change was not statistically significant. Even though the majority (78%) of affected households reported they knew where to seek behavioral health support, only 16% actually sought assistance.

The percentage of Kauai households who are very concerned or somewhat concerned about their ability to pay their next month's rent/mortgage declined from 34% in April 2020 to 17% in August 2022.

The majority of Kauai households reported that their current annual income is about the same (60%) or higher (12%) than it was pre-pandemic. Although most Kauai households seem to have returned to their pre-pandemic economic state, 24% of households reported that their current household income is a little lower (11%) or much lower (13%) than it was before COVID.

40% of Kauai households reported having received one or more of the following community resources during the pandemic: food distribution programs (20%), unemployment benefits (19%), WIC/SNAP/Da Bux (10%), rent/utilities assistance (4%).

The vast majority (83%) of Kauai households reported that they continue to think it is very important (47%) or somewhat important (36%) to wear a mask indoors in places other than their home even though Hawaii's indoor mask mandate ended in late March 2022. This indicates that in the absence of legal mandates, the majority of Kauai residents continue to understand public health recommendations intended to mitigate the spread of COVID-19.

**Table 5. Kauai 2022 CASPER Impacts of COVID-19 questions with unweighted and weighted 2022 results (n=176) with results from 2020 (n=189) for comparison.**

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
<b>How concerned are you about your household members getting sick with COVID-19?</b>								
Very concerned	60	34.1	8353	33.8 (23.8, 43.8)	37.4 (31.3, 43.6)	N/A	N/A	N/A
Somewhat concerned	62	35.2	8765	35.5 (26.9, 44.0)	32.7 (26.6, 38.7)	N/A	N/A	N/A
Not concerned	51	29.0	7147	28.9 (20.0, 37.8)	27.3 (21.0, 33.6)	N/A	N/A	N/A
Don't Know	3	1.7	-	-	2.7 (0.4, 4.9)	N/A	N/A	N/A
<b>Have you or anyone in your household experienced emotional distress related to the COVID-19 pandemic?</b>								
Yes	64	36.4	8920	36.1 (29.7, 42.5)	31.8 (25.2, 38.3)	N/A	N/A	N/A
No	108	61.4	15139	61.3 (54.9, 67.6)	66.7 (60.5, 72.9)	N/A	N/A	N/A
Don't know	4	2.3	-	-	-	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
<b>If yes, has anyone in your household sought mental/behavioral support services?</b>								
Yes	11	17.2	1449	16.2 (6.4, 26.1)	N/A	N/A	N/A	N/A
No	51	79.7	7216	80.9 (71.2, 90.6)	N/A	N/A	N/A	N/A
Don't know	1	1.6	-	-	N/A	N/A	N/A	N/A
Refused	1	1.6	-	-	N/A	N/A	N/A	N/A
<b>How does your household income now compare with what it was before the pandemic?</b>								
A lot less	25	14.2	3289	13.3 (8.2, 18.4)	N/A	N/A	N/A	N/A
A little less	21	11.9	2665	10.8 (6.1, 15.4)	N/A	N/A	N/A	N/A
About the same	102	58.0	14731	59.6 (51.5, 67.7)	N/A	N/A	N/A	N/A
A little more	15	8.5	2234	9.0 (3.3, 14.8)	N/A	N/A	N/A	N/A
A lot more	6	3.4	794	3.2 (0.3, 6.1)	N/A	N/A	N/A	N/A
Don't know	6	3.4	881	3.6 (0.5, 6.7)	N/A	N/A	N/A	N/A
Refused	1	0.6	-	-	N/A	N/A	N/A	N/A
<b>How concerned are you about your household's ability to pay the next month's rent or mortgage?</b>								
Very concerned	16	9.1	2242	9.1 (4.4, 13.8)	13.4 (7.8, 19.0)	N/A	N/A	N/A
Somewhat concerned	15	8.5	2053	8.3* (3.6, 13.0)	20.3 (14.3, 26.3)	N/A	N/A	N/A
Not concerned	139	79.0	19558	79.1 (72.3, 86.0)	65.3 (58.0, 72.7)	N/A	N/A	N/A
Don't Know	5	2.8	722	2.9 (0.0, 6.5)	-	N/A	N/A	N/A
Refused	1	0.6	-	-	-	N/A	N/A	N/A

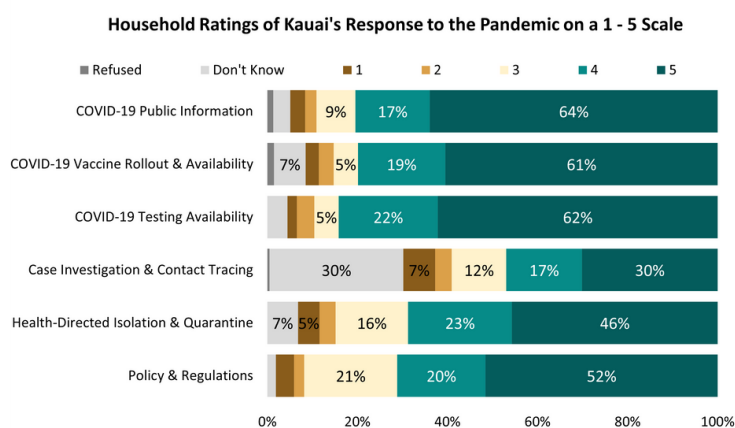
\*Represents a statistically significant difference between a weighted percentage for a year and the most recent year.

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
<b>Hawaii's indoor mask mandate ended in late March 2022. How important do you think it is to continue to wear a mask indoors in places other than your home?</b>								
Very important	82	46.6	11613	47.0 (36.8, 57.2)	N/A	N/A	N/A	N/A
Somewhat important	63	35.8	8779	35.5 (27.4, 43.6)	N/A	N/A	N/A	N/A
Not important	27	15.3	3830	15.5 (7.7, 23.3)	N/A	N/A	N/A	N/A
Don't Know	3	1.7	-	-	N/A	N/A	N/A	N/A
Refused	1	0.6	-	-	N/A	N/A	N/A	N/A
<b>Which of the following community resources has your household received during the pandemic?</b>								
Food distribution programs	34	19.3	5031	20.4* (12.7, 28.0)	4.9 (1.7, 8.1)	N/A	N/A	N/A
Unemployment benefits	35	19.9	4709	19.1 (12.6, 25.5)	N/A	N/A	N/A	N/A
WIC / SNAP / Da Bux	19	10.8	2322	10.4 (5.1, 15.7)	10.1 (5.3, 14.9)	N/A	N/A	N/A
Rent / utilities assistance	6	3.4	910	3.7 (0.3, 7.0)	N/A	N/A	N/A	N/A
Mortgage forbearance	4	2.3	-	-	N/A	N/A	N/A	N/A
Other	2	1.1	-	-	8.0 (4.0, 12.0)	N/A	N/A	N/A
None of the above	106	60.2	14861	60.1* (49.8, 70.5)	81.4 (74.8, 88.1)	N/A	N/A	N/A
Don't know	1	0.6	-	-	N/A	N/A	N/A	N/A
Refused	1	0.6	-	-	N/A	N/A	N/A	N/A

\*Represents a statistically significant difference between a weighted percentage for a year and the most recent year.

## Pandemic Response

Households were asked to rate Kauai's response to the pandemic in several key areas on a likert scale of 1 to 5 with 1 representing "very poor" and 5 representing "very good". The lowest rating (3.85) was associated with case investigation and contact tracing, which also had the highest percentage of "don't know" responses. For those who had never had COVID, they often felt unable to provide a rating for the response in this area.



**Figure 5.** Household rating of Kauai's response to the COVID-19 pandemic on a likert scale (n=176). Bars under 5% are not labeled.

Anecdotal reports from survey teams indicated that some of these "very poor" and "poor" ratings were the result of households being unsupportive of case investigation and contact tracing efforts rather than a review of the service itself.

The highest rating was associated with COVID-19 testing availability (4.45), followed closely by COVID-19 public information (4.42) and vaccine rollout and availability (4.42).

Areas of Pandemic Response	Weighted Mean	Weighted Median
COVID-19 Public Information	4.42	5
COVID-19 Vaccine Rollout & Availability	4.44	5
COVID-19 Testing Availability	4.45	5
Case Investigation & Contact Tracing	3.85	4
Health-Directed Isolation & Quarantine	4.09	4
Policy & Regulations	4.15	5

**Table 6.** Weighted means and medians of the household ratings of Kauai's pandemic response (n=176).

**Table 7.** Kauai 2022 CASPER Kauai's pandemic response questions with unweighted and weighted 2022 results (n=176).

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
<b>On a scale of 1 - 5, with 1 being very poor and 5 being very good, how would you rate Kauai's response to the pandemic in the following areas:</b>								
Policies & regulations (mask mandates, gathering/travel restrictions, etc.)								
1	7	4.0	998	4.0 (1.2, 6.9)	N/A	N/A	N/A	N/A
2	4	2.3	-	-	N/A	N/A	N/A	N/A
3	34	19.3	5095	20.6 (12.3, 28.9)	N/A	N/A	N/A	N/A
4	35	19.9	4852	19.6 (14.1, 25.2)	N/A	N/A	N/A	N/A
5	92	52.3	12736	51.5 (42.6, 60.5)	N/A	N/A	N/A	N/A
Don't know	4	2.3	-	-	N/A	N/A	N/A	N/A
Refused	0	0	-	-	N/A	N/A	N/A	N/A



Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
Health-directed isolation & quarantine								
1	8	4.6	1183	4.8 (1.7, 7.9)	N/A	N/A	N/A	N/A
2	5	2.8	881	3.6 (0.3, 6.8)	N/A	N/A	N/A	N/A
3	29	16.5	3970	16.1 (9.6, 22.6)	N/A	N/A	N/A	N/A
4	40	22.7	5711	23.1 (17.7, 28.6)	N/A	N/A	N/A	N/A
5	82	46.6	11285	45.7 (36.9, 54.4)	N/A	N/A	N/A	N/A
Don't know	12	6.8	1683	6.8 (2.2, 11.4)	N/A	N/A	N/A	N/A
Refused	0	0	-	-	N/A	N/A	N/A	N/A
Case investigation & contact tracing								
1	12	6.8	1749	7.1 (2.2, 11.9)	N/A	N/A	N/A	N/A
2	7	4.0	910	3.7 (1.1, 6.2)	N/A	N/A	N/A	N/A
3	22	12.5	2999	12.1 (7.3, 17.0)	N/A	N/A	N/A	N/A
4	30	17.1	4148	16.8 (11.6, 22.0)	N/A	N/A	N/A	N/A
5	55	31.3	7449	30.1 (23.0, 37.3)	N/A	N/A	N/A	N/A
Don't know	49	27.8	7339	29.7 (22.9, 36.5)	N/A	N/A	N/A	N/A
Refused	1	0.6	-	-	N/A	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
COVID-19 testing availability								
1	3	1.7	-	-	N/A	N/A	N/A	N/A
2	7	4.0	959	3.9 (1.1, 6.6)	N/A	N/A	N/A	N/A
3	9	5.1	1324	5.4 (1.0, 9.7)	N/A	N/A	N/A	N/A
4	38	21.6	5446	22.0 (15.6, 28.5)	N/A	N/A	N/A	N/A
5	111	63.1	15357	62.1 (55.1, 69.1)	N/A	N/A	N/A	N/A
Don't know	8	4.6	1096	4.4 (0.7, 8.2)	N/A	N/A	N/A	N/A
Refused	0	0	-	-	N/A	N/A	N/A	N/A
COVID-19 vaccine rollout & availability								
1	5	2.8	716	2.9 (0.4, 5.4)	N/A	N/A	N/A	N/A
2	5	2.8	812	3.3 (0.3, 6.3)	N/A	N/A	N/A	N/A
3	11	6.3	1334	5.4 (2.7, 8.1)	N/A	N/A	N/A	N/A
4	34	19.3	4793	19.4 (12.9, 25.8)	N/A	N/A	N/A	N/A
5	107	60.8	14951	60.5 (53.8, 67.2)	N/A	N/A	N/A	N/A
Don't know	12	6.8	1736	7.0 (2.9, 11.2)	N/A	N/A	N/A	N/A
Refused	2	1.1	-	-	N/A	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>Impacts of COVID-19</b>								
COVID-19 public information								
1	6	3.4	820	3.3 (0.8, 5.9)	N/A	N/A	N/A	N/A
2	4	2.3	-	-	N/A	N/A	N/A	N/A
3	16	9.1	2126	8.6 (4.3, 12.9)	N/A	N/A	N/A	N/A
4	30	17.1	4091	16.6 (10.7, 22.4)	N/A	N/A	N/A	N/A
5	111	63.1	15794	63.9 (57.0, 70.9)	N/A	N/A	N/A	N/A
Don't know	7	4.0	930	3.8 (1.1, 6.4)	N/A	N/A	N/A	N/A
Refused	2	1.1	-	-	N/A	N/A	N/A	N/A

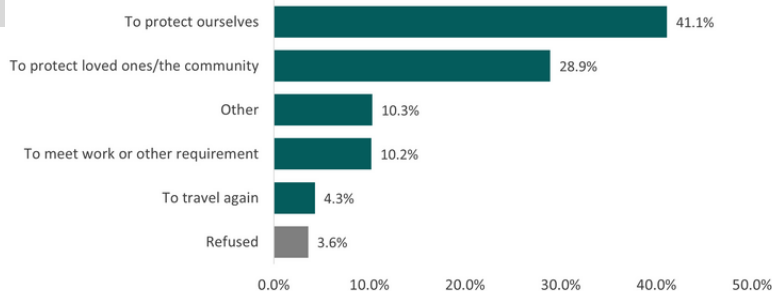
## COVID-19 Vaccination

The majority (85%) of Kauai households reported all (75%) or some (10%) members aged five or older have received at least one dose of a COVID-19 vaccine. However, only 55% reported that all household members are boosted. The most common reasons household members had not been boosted, included: not feeling it was needed (24%), trust issues (10%), inconvenient (11%), ineligible (7%), don't know (10%), and other (12%). Common "other" responses included "stubbornness", "scheduled", "had COVID recently" and "didn't know it was available".

For vaccinated household members, the primary reasons for choosing to be vaccinated were: to protect themselves (41%), to protect loved ones/the community (29%), or to meet a work/other requirement (10%) (Figure 6). For the 30% of households with members who were unvaccinated, the primary reasons for choosing not to be vaccinated were: safety concerns (25%), don't feel it's needed (19%), trust issues (16%), and side effects (12%) (Figure 7).

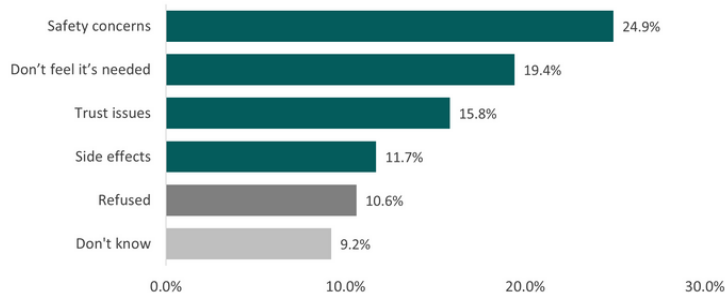
Of the 20% of households with children under the age of five, 31% have either already vaccinated them (13%) or plan to make an appointment (18%). 33% do not plan to vaccinate them and 29% don't know yet whether or not they will vaccinate their children under the age of five.

**Why Vaccinated Household Members received the COVID-19 Vaccine**



**Figure 6.** The most important reason vaccinated household members received the COVID-19 vaccine (n=159).

**Why Unvaccinated Household Members did NOT receive a COVID-19 Vaccine**



**Figure 7.** The most important reason unvaccinated household members have not received the COVID-19 vaccine (n=53).

Table 8. Kauai 2022 CASPER COVID-19 vaccination questions with unweighted (n=176) and weighted (n=24,712) 2022 results.

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>COVID-19 Vaccinations</b>								
Does your household have any members under the age of 5?								
Yes	36	20.5	4872	19.7 (11.5, 27.9)	N/A	N/A	N/A	N/A
No	140	79.6	19840	80.3 (72.1, 88.5)	N/A	N/A	N/A	N/A
COVID-19 Vaccines are available to all Kauai residents 6 months of age and older, with vaccines only recently being authorized for those 6 months through 4 years. For your household members under the age of 5, did you already get them vaccinated?								
Yes, right away / have an appointment	5	2.8	628	12.9 (1.2, 2.6)	N/A	N/A	N/A	N/A
Not yet, but I plan to make an appointment	7	4.0	883	18.1 (6.2, 30.1)	N/A	N/A	N/A	N/A
No, do not plan to vaccinate	12	6.8	1626	33.4 (14.6, 52.1)	N/A	N/A	N/A	N/A
Don't know	10	5.7	1412	29.0 (14.3, 43.6)	N/A	N/A	N/A	N/A
Refused	2	1.1	-	-	N/A	N/A	N/A	N/A
Have your household members 5 years and older received at least one dose of a COVID-19 vaccine?								
Yes, all of them	131	74.4	18430	74.6 (65.4, 83.8)	N/A	N/A	N/A	N/A
Some of them	18	10.2	2569	10.4 (4.9, 15.9)	N/A	N/A	N/A	N/A
None of them	20	11.4	2742	11.1 (5.0, 17.2)	N/A	N/A	N/A	N/A
Don't know	2	1.1	-	-	N/A	N/A	N/A	N/A
Refused	5	2.8	696	2.8 (0.3, 5.3)	N/A	N/A	N/A	N/A



Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>COVID-19 Vaccinations</b>								
Is anyone in your household vaccinated but has not yet received their booster dose(s)?								
Yes	75	44.9	10475	44.6 (36.6, 52.6)	N/A	N/A	N/A	N/A
No - All members are boosted	92	55.1	13011	55.4 (47.4, 63.4)	N/A	N/A	N/A	N/A
If yes, what is the primary reason for not receiving their booster dose(s)?								
Safety concerns	4	2.4	-	-	N/A	N/A	N/A	N/A
Side effects	3	1.8	-	-	N/A	N/A	N/A	N/A
Trust issues	6	3.6	998	9.5 (1.4, 17.7)	N/A	N/A	N/A	N/A
Vaccine is not effective enough	2	1.2	-	-	N/A	N/A	N/A	N/A
Inconvenient to receive it	9	5.4	1098	10.5 (3.2, 17.7)	N/A	N/A	N/A	N/A
Don't feel it's needed	19	11.4	2497	23.8 (12.4, 35.3)	N/A	N/A	N/A	N/A
Ineligible	5	3.0	765	7.3 (0.0, 15.7)	N/A	N/A	N/A	N/A
Other	9	5.4	1267	12.1 (4.2, 20.0)	N/A	N/A	N/A	N/A
Don't know	10	6.0	1567	15.0 (5.6, 24.3)	N/A	N/A	N/A	N/A
Refused	8	4.8	1116	10.7 (3.5, 17.8)	N/A	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>COVID-19 Vaccinations</b>								
Does your household have any vaccinated household members?								
Yes	159	90.3	22382	90.6 (86.2, 95.0)	N/A	N/A	N/A	N/A
No - No vaccinated members	17	9.7	2330	9.4 (5.0, 13.8)	N/A	N/A	N/A	N/A
For vaccinated household members, what was the most important reason they chose to get vaccinated?								
To protect ourselves	64	36.4	9189	41.1 (32.0, 50.1)	N/A	N/A	N/A	N/A
To protect loved ones/the community	48	27.3	6460	28.9 (20.2, 37.5)	N/A	N/A	N/A	N/A
To gather safely with friends and family	1	0.6	-	-	N/A	N/A	N/A	N/A
To travel again	7	4.0	957	4.3 (1.3, 7.2)	N/A	N/A	N/A	N/A
To improve our financial outlook	0	0	-	-	N/A	N/A	N/A	N/A
To meet work or other requirement	16	9.1	2289	10.2 (4.4, 16.1)	N/A	N/A	N/A	N/A
Other	15	8.5	2301	10.3 (4.2, 16.4)	N/A	N/A	N/A	N/A
Don't know	2	1.1	-	-	N/A	N/A	N/A	N/A
Refused	6	3.4	814	3.6 (0.3, 6.9)	N/A	N/A	N/A	N/A

Question	Frequency	Percent Households	Projected Households	2022 Weighted % & 95% CI	2020 Weighted % & 95% CI	2019 Weighted % & 95% CI	2018 Weighted % & 95% CI	2017 Weighted % & 95% CI
<b>COVID-19 Vaccinations</b>								
Does your household have any unvaccinated household members?								
Yes	53	30.1	7516	30.4 (21.2, 39.6)	N/A	N/A	N/A	N/A
No - all members are vaccinated	123	69.9	17196	69.6 (60.4, 78.8)	N/A	N/A	N/A	N/A
For unvaccinated household members, what was the most important reason why they chose not to get vaccinated?								
Safety concerns	12	6.8	1871	24.9 (13.0, 36.8)	N/A	N/A	N/A	N/A
Side effects	7	4.0	883	11.7 (3.8, 19.6)	N/A	N/A	N/A	N/A
Trust issues	8	4.6	1187	15.8 (4.3, 27.3)	N/A	N/A	N/A	N/A
Vaccine is not effective enough	0	0	-	-	N/A	N/A	N/A	N/A
Inconvenient to receive it	1	0.6	-	-	N/A	N/A	N/A	N/A
Don't feel it's needed	10	5.7	1459	19.4 (7.9, 31.0)	N/A	N/A	N/A	N/A
Ineligible	2	1.1	-	-	N/A	N/A	N/A	N/A
Other	2	1.1	-	-	N/A	N/A	N/A	N/A
Don't know	5	2.8	694	9.2 (1.7, 16.8)	N/A	N/A	N/A	N/A
Refused	6	3.4	794	10.6 (0.0, 21.8)	N/A	N/A	N/A	N/A

# DISCUSSION

Annual preparedness CASPERs from 2017 to 2019 collected valuable data about the island's residents, including health status and preparedness levels which was utilized to inform county and state emergency response plans. Preparedness CASPERs also served as an enormous capacity building exercise for the Kauai District Health Office and partner agencies, allowing collaboration across programmatic silos and increasing community awareness of agencies and the services they provide. CASPERs have also served as valuable outreach and education opportunities, with survey teams providing participating and non-participating households with emergency preparedness and communicable disease resources.

Having developed this capacity during non-emergency times allowed us to rapidly deploy survey teams to assess health and economic needs on the ground in the early days of the pandemic. In 2022, the Kauai CASPER continued the efforts of the 2017 to 2019 preparedness CASPERs, while also collecting information regarding the ongoing impact of the pandemic on Kauai households. In the context of climate change, with increasing frequency of tropical storm and flood events, the ability to rapidly conduct community needs assessments will facilitate effective emergency response and should be considered an essential public health capability.

The information collected throughout the five Kauai CASPERs has been used to inform state and county emergency response plans and operations with the ultimate goal of enabling the Department of Health and the County of Kauai to better meet the community's health and other resource needs following a disaster. A summary of trends and changes over time as well as final recommendations based on the data collected are detailed in the following sections.

## Changes, Trends, and Predictors

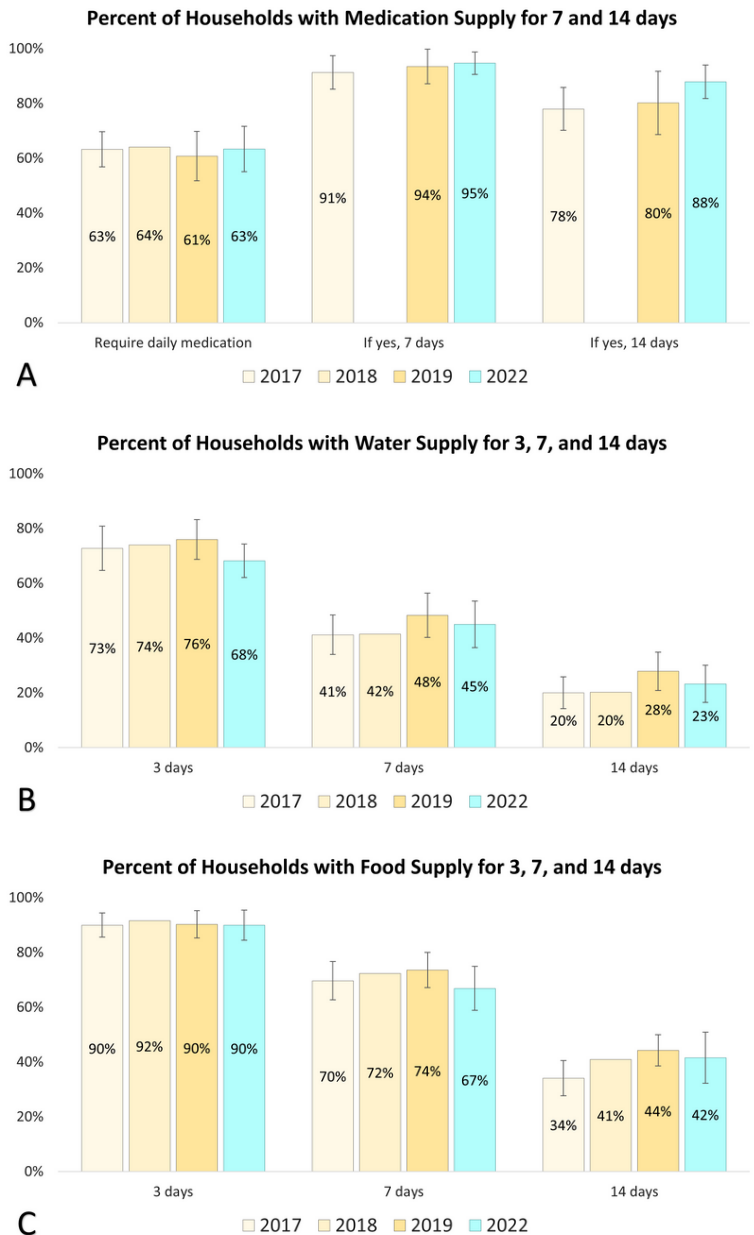
Where possible, this report analyzes changes over time for questions that were assessed in the same way year-over-year.

### *Emergency Preparedness and Evacuation Plans*

Tracking community progress on indicators such as emergency supplies, evacuation plans, and communication sources allows emergency management partners to assess gaps, prioritize limited resources, and evaluate the impact of county, state, and non-profit efforts to achieve an informed and prepared community for all hazards. Statistically significant differences were observed across several household emergency preparedness indicators.

In 2017, the Hawaii Emergency Management Agency changed the recommendation from a 7-day to a 14-day supply of food, water, and prescription medications for all households in recognition of the challenges to emergency response and recovery posed by the geographic isolation of the State of Hawaii. The percentage of households with the recommended 14-day supply of food, water, and medication has risen slightly from 2017 to 2022 (Figures 8 A - C). While these changes were not statistically significant, the trend suggests that we are at least moving in the right direction.

Importantly, just over a third (36%) of Kauai households have at least a 7-day supply of both food and water while only 16% have the recommended 14-day supply.



**Figure 8 A - C.** Percent of households that had a supply of medicine, water, and food for 3, 7, and 14 days, respectively, for 2022 (n=176) and 2019 (n=186), 2018 (n=190), and 2017 (n=186).

The percentage of households with other emergency supplies (e.g. emergency supply kit, first aid kit, emergency generator, emergency radio) has remained stagnant since 2017 and there have been no significant changes in the barriers identified by households to putting together emergency supplies. Many households just haven't gotten around to doing so.

In addition to emergency supplies, Kauai CASPERs have gathered important information on the emergency and evacuation plans of Kauai residents.



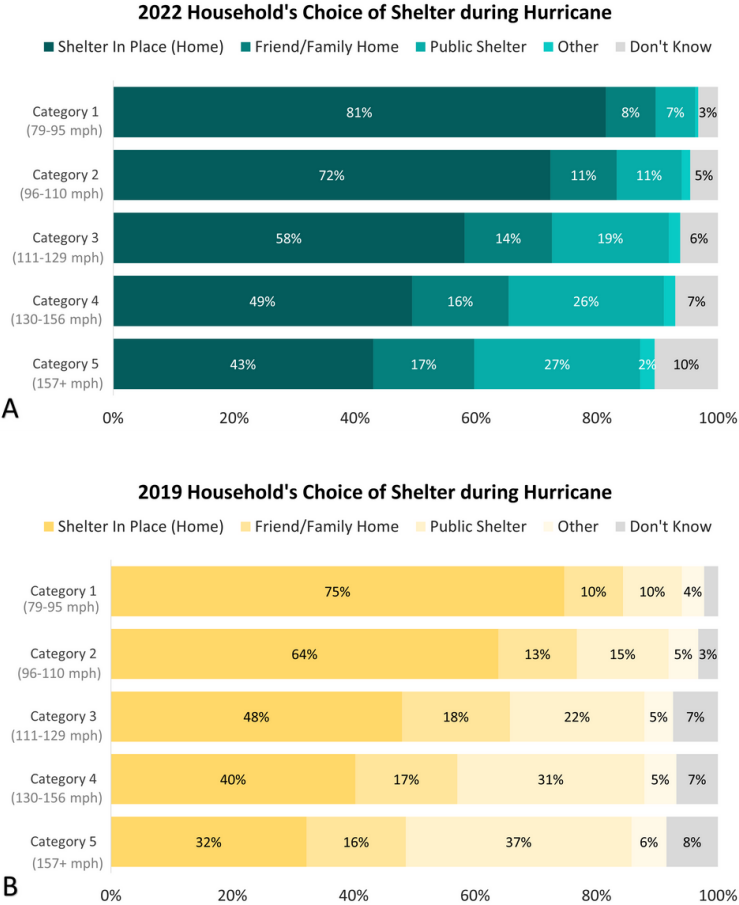
Year-over-year, the percentage of households who have emergency communication plans (57%), designated emergency meeting points (51%), and copies of important documents in a safe location (75%) has remained static from 2017 to 2022.

About 40% of households identified a barrier to evacuation when asked to do so, which has been consistent across the years. The percentage of households that require some type of assistance during an emergency (e.g. ADA accommodations, refrigeration for essential medication, electricity for a medical device, caregiving assistance for a disability or illness, paratransit service, and/or a hospital/home care bed) increased from 17% in 2019 to 24% in 2022. This change was not statistically significant, but is a trend that should be carefully monitored by emergency management officials as assisting these households during emergencies requires an enormous amount of resources that will be in limited supply and have many competing demands.

While the percentage of households signed up to receive weather and other disaster-related alerts has stayed fairly constant at about 67%, the percentage of households familiar with the Kauai Emergency Management Agency's (KEMA) website has increased substantially over the years. In 2017, only 34% of households were familiar with this resource compared to 49% in 2019, 80% in 2020, and 56% in 2022. All of these changes were statistically significant. These changes are likely due to the number of floods, landslides, and other disasters that occurred during this time, with KEMA's website serving as an essential resource for public information. Further, the KEMA website was one of the primary communication methods used by the County of Kauai and the Kauai District Health Office to provide up-to-date information on COVID cases, regulations, and other information. It's interesting to note, however, that the gains observed during COVID when this was the primary communication tool were not retained and familiarity declined significantly from 2020 to 2022.

In 2019, significant changes were made to the questionnaire to account for the complexity of household evacuation plans, which prior Kauai CASPERs found to vary significantly depending upon hazard severity and type. Household evacuation plans were assessed for each category of hurricane and demonstrated a strong trend that as the category of storm increases, the percentage of households intending to seek public shelter increases substantially. This trend was observed, again, during the 2022 CASPER. Interestingly, although the trend remains in place, the percentage of households that plan to seek public shelter for each category of storm decreased across the board in 2022 compared to 2019. A higher percentage of households indicated they would shelter-in-place instead (Figures 9 A and B). It's possible that the pandemic has seriously impacted Kauai household plans for hurricane evacuations by decreasing the number of people who are interested in evacuating to a crowded, public shelter (e.g. from 37% of households seeking public shelter for a category 5 storm in 2019 down to 27% in 2022). In the context of a pandemic environment, more households seem likely to shelter-in-place even as the category of storm increases. While these changes were not statistically significant, future CASPER data on this topic should be carefully monitored by emergency managers over the next couple of years.

While an analysis of Kauai preparedness indicators from 2017 to 2022 suggests some important progress has been made, we have a long way to go to achieve an informed and prepared community for all hazards.



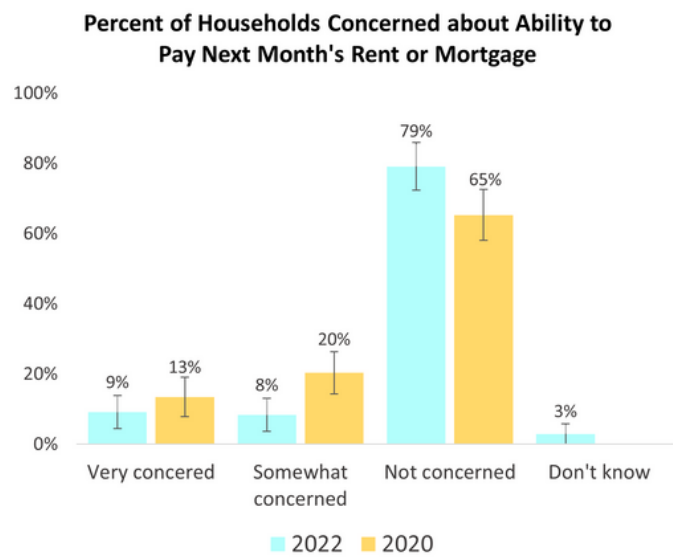
Figures 9 A and B. Household-level shelter locations for each category of hurricane for 2022 (n=176) and 2019 (n=186).

COVID-19 Pandemic Impacts

The 2020 COVID CASPER focused on the health, mental health, and economic impact of the pandemic on Kauai households. Where the 2022 CASPER asked the same questions, the differences in responses are discussed below and represent an opportunity to evaluate how well Kauai households have weathered the pandemic with the county, state, and federal resources available. Statistically significant differences were observed across several COVID-19 indicators.

Although the disease risk landscape changed considerably from April 2020 to July 2022 with the release of multiple COVID-19 vaccines and treatment options, concern amongst households about getting sick with COVID-19 remained the same rather than declining as we might have expected. The percentage of households that experienced emotional distress related to the pandemic rose slightly from 32% in 2020 to 36% in 2022 but this change was not statistically significant.

Most Kauai households reported that their current annual income is about the same (60%) or higher (12%) than it was pre-pandemic. This is supported by the statistically significant decline observed in the percentage of households who are very concerned (13.4% to 9.1%) or somewhat concerned (20.3% to 8.3%) about their ability to pay the next month's rent or mortgage and suggests that most households have stabilized by this point in the pandemic (Figure 10). Some of this stabilization may have been the result of the myriad of county, state, and federal relief programs that were implemented during this time period. For example, the percentage of households that reported having received at least one type of community resource during the pandemic doubled from 19% in 2020 to 40% in 2022. This change was statistically significant. Much of this change was observed in the rise in households that participated in free food distribution programs, most of which were launched after the 2020 COVID CASPER was conducted.



**Figure 10.** The percent of households at each level of concern regarding their ability to pay the next month's rent or mortgage in 2022 (n=176) and 2020 (n=189).

### Predictors and Measures of Association

A proxy for household vaccination status was created by extracting the "Not Applicable - All household members are vaccinated" from the question "For unvaccinated household members, what was the most important reason why they chose not to get vaccinated?" This newly created variable divided our data into households where all members are vaccinated and households that have at least one unvaccinated member.

This variable was analyzed across several other COVID-19 survey questions such as concern about getting sick with COVID-19, household rating of Kauai's response to the pandemic, and the household's opinion on the importance of masking indoors in places other than their home. See contingency tables on the following page to view unweighted frequencies cross-tabulated.

The prevalence of choosing "Not Important" when asked about the importance of masking indoors was 3.38 times higher (95% CI [1.46, 7.85]) among households with at least one unvaccinated member versus among households where all members were vaccinated. This prevalence ratio was statistically significant.

Next we looked at whether households with at least one unvaccinated member were more likely to rate Kauai's response to the pandemic in various areas as "very poor", "poor" or "average" (ratings 1, 2, and 3 on a 5 point likert scale) than households where all members were vaccinated. The four categories where statistically significant differences between how fully vaccinated households responded compared to partially vaccinated/unvaccinated households are detailed below. Table 9 shows the prevalence ratios and 95% confidence intervals for all pandemic response categories.

The prevalence of rating KDHO's response to the pandemic in **vaccine rollout & availability** a 3 or less on a scale of 1 to 5 (1 being very poor, 5 being very good) was 3.80 times higher (95% CI [1.70, 8.49]) among households with at least one unvaccinated member versus among households where all members were vaccinated. This prevalence ratio was statistically significant.

The prevalence of rating KDHO's response to the pandemic in **testing availability** a 3 or less on a scale of 1 to 5 (1 being very poor, 5 being very good) was 2.65 times higher (95% CI [1.10, 6.37]) among households with at least one unvaccinated member versus among households where all members were vaccinated. This prevalence ratio was statistically significant.

The prevalence of rating KDHO's response to the pandemic in **health-directed isolation and quarantine** a 3 or less on a scale of 1 to 5 (1 being very poor, 5 being very good) was 2.54 times higher (95% CI [1.44, 4.47]) among households with at least one unvaccinated member versus among households where all members were vaccinated. This prevalence ratio was statistically significant.

The prevalence of rating KDHO's response to the pandemic in **policies and regulations** a 3 or less on a scale of 1 to 5 (1 being very poor, 5 being very good) was 1.81 times higher (95% CI [1.18, 2.77]) among households with at least one unvaccinated member versus among households where all members were vaccinated. This prevalence ratio was statistically significant.

Pandemic Response Rating by Household Vaccination Status		
Category	Prevalence Ratio	95% CI
COVID-19 Public Information	1.55	(0.65, 3.68)
COVID-19 Vaccine Rollout & Availability	3.80*	(1.70, 8.49)
COVID-19 Testing Availability	2.65*	(1.10, 6.37)
Case Investigation & Contact Tracing	1.36	(0.75, 2.48)
Health-Directed Isolation & Quarantine	2.54*	(1.44, 4.47)
Policy & Regulations	1.81*	(1.18, 2.77)

**Table 9.** Weighted prevalence ratios are shown that represent how many times higher households with unvaccinated household members were to rank Kauai's response to the pandemic as a 3 or lower on a scale of 1 - 5 (with 1 being very poor and 5 being very good) in comparison to households with all vaccinated members (n = 176). Statistically significant prevalence ratios are marked with an asterisk.

## Contingency Tables

Importance of Masking Indoors			
	"Not Important"	"Somewhat" or "Very Important"	Total
Unvaccinated Household Members	16	35	51
All Household Members Vaccinated	11	110	121
<b>Total</b>	27	145	172

Concern about getting sick with COVID-19			
	"Not Concerned"	"Somewhat" or "Very Concerned"	Total
Unvaccinated Household Members	19	33	52
All Household Members Vaccinated	32	89	121
<b>Total</b>	51	122	173

COVID-19 Public Information			
	3 or less	4 or 5	Total
Unvaccinated Household Members	11	39	50
All Household Members Vaccinated	15	102	117
<b>Total</b>	26	141	167

COVID-19 Vaccine Rollout & Availability			
	3 or less	4 or 5	Total
Unvaccinated Household Members	13	32	45
All Household Members Vaccinated	8	109	117
<b>Total</b>	21	141	162

COVID-19 Testing Availability			
	3 or less	4 or 5	Total
Unvaccinated Household Members	11	39	50
All Household Members Vaccinated	8	110	118
<b>Total</b>	19	149	168

Case Investigation & Contact Tracing			
	3 or less	4 or 5	Total
Unvaccinated Household Members	14	24	38
All Household Members Vaccinated	27	61	88
<b>Total</b>	41	85	126

Health-Directed Isolation & Quarantine			
	3 or less	4 or 5	Total
Unvaccinated Household Members	21	29	50
All Household Members Vaccinated	21	93	114
<b>Total</b>	42	122	164

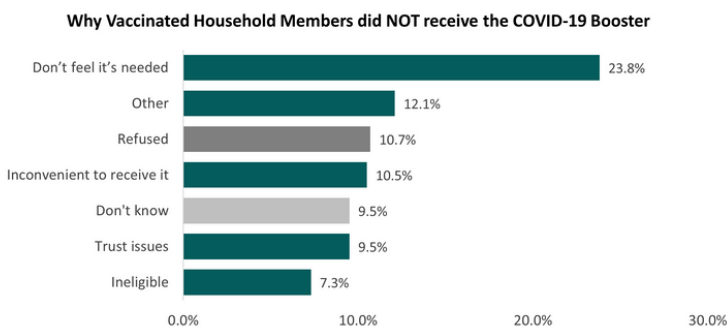
Policy & Regulations			
	3 or less	4 or 5	Total
Unvaccinated Household Members	20	33	53
All Household Members Vaccinated	25	94	119
<b>Total</b>	45	127	173

## Recommendations

Based on results from the 2022 Kauai CASPER and comparison of data from 2017 to 2022, recommendations are listed below.

1. The majority (85%) of Kauai households have all members vaccinated (75%) or some members vaccinated (10%), but only (53%) have been boosted. Of vaccinated households with members who had not received their boosters, the most common reasons cited were that they didn't feel it was needed (23%), it was inconvenient (11%), or trust issues (10%). Vaccinated households reported that they chose to be vaccinated in order to protect themselves (37%) or to protect loved ones/the community (26%). A smaller percentage chose to be vaccinated in order to meet a work/other requirement (9%).

*As new variants emerge and spread, and vaccines are tweaked, ongoing response efforts and communications by KDHO and community leaders are essential. Future messaging regarding the importance of receiving all recommended booster doses should focus on this being how we continue to protect ourselves and our community by keeping COVID cases and hospitalizations low--the primary reasons vaccinated households chose to be vaccinated--and clearly address the misconception that boosters are unnecessary.*



**Figure 13.** The most important reason non-boosted household members have not received the COVID-19 booster (n=75).

2. The percentage of households reporting having experienced emotional distress related to the pandemic rose slightly from 32% in April 2020 to 36% in August 2022. On Kauai, it appears that most households that experienced emotional distress during the pandemic did so early on, likely as a result of the enormous impact travel restrictions had on our economic sector, which relies heavily on tourism, and possibly as a result of the many unknowns in the early months of the pandemic. Even though the majority (78%) of affected households reported they knew where to seek help, only 16% actually sought assistance. Access to mental and behavioral support services, especially via tele-health, expanded significantly both in Hawaii and nationwide during the pandemic and, yet, many households that might have benefitted from those services did not seek assistance.

*An enormous stigma regarding seeking mental health support exists in Hawaii. Additional efforts are necessary to start breaking down the cultural barriers and stigma against seeking assistance.*

3. The percentage of Kauai households who are very concerned or somewhat concerned about their ability to pay their next month's rent/mortgage declined from 34% in April 2020 to 17% in August 2022. The majority of Kauai households reported that their current annual income is about the same (60%) or higher (12%) than it was pre-pandemic. Although most Kauai households seem to have returned to their pre-pandemic economic state, 13% reported that their current household income is much lower than it was pre-pandemic.

*The abrupt end of federal and state assistance, the volatile market, and rampant inflation has left a small percentage of Kauai households in a difficult economic position. It is critical that we continue to work with residents to ensure access to available support services (e.g. food banks, WIC/SNAP, section 8 housing). However, escalating cost-of-living (especially housing) is a nationwide issue and continued work with county, state, and federal policy-makers is needed.*

4. Most households rated Kauai's response to the pandemic as good or very good on a likert scale of 1 to 5 with 1 representing "very poor" and 5 representing "very good". The lowest rating (3.85) was associated with case investigation and contact tracing, while the highest rating was associated with COVID-19 testing availability (4.45), followed closely by COVID-19 public information (4.44) and vaccine rollout and availability (4.42). This finding is remarkable given how controversial COVID response efforts have been nationwide. Notably, the highly rated public communication efforts were instrumental to ensuring the success of the other areas of our response, including vaccine rollout and testing availability. The success of COVID-19 public messaging on Kauai was only possible through the strong partnership between the County of Kauai and the Kauai District Health Office and the willingness of the county to push out health-related messaging to our residents.

*Public communication is a foundational public health capability which should be developed and maintained in every local health department and district office. It should not rely on the good graces of partners, however strong those partnerships.*

5. Of the 18% of households with children under the age of five, 6% have already vaccinated them (2%) or have an appointment (4%). 7% do not plan to vaccinate them and 6% don't know. Put simply, one third of Kauai parents intend to or have already vaccinated their children under five, one third do not plan to vaccinate, and one third is undecided.

*Additional effort is needed to ensure that parents have access to all the information they need regarding COVID-19 vaccines for children under five. The most trusted source of that information and sounding board for questions is likely to be their child's pediatrician, with whom they already have an established relationship. Since most COVID-19 mitigation measures were dropped in Hawaii classrooms for Fall 2022, it's even more important that parents consider vaccination for their school-aged children. The Department of Health should continue to provide all possible support to pediatric offices in offering COVID-19 vaccines to their patients. Messaging about vaccination to protect the community (common reason identified by households for getting vaccinated) could be useful for encouraging COVID-19 vaccinations for this age group.*

6. The majority (70%) of Kauai households are familiar with the evacuation zones on Kauai. For those who aren't, about half (49%) also don't know where to find that information. The vast majority (89%) of households indicated that they would evacuate inland to higher ground if they were in a tsunami evacuation zone when a tsunami warning was issued, but 3% indicated they would ignore the evacuation order and 4% didn't know what they would do.

*Tsunamis are quick-action emergencies, meaning there is often very little time from hazard identification to inundation. Kauai households should be familiar with the zones and have established evacuation plans. An island-wide campaign should be conducted to raise awareness surrounding tsunami evacuation zones and appropriate evacuation plans.*

7. The percentage of Kauai households indicating they would evacuate to a public shelter increases with each category of hurricane, with over 25% of households in 2022 indicating they plan to evacuate to a public shelter for a category 4 or 5 storm (Figure 12). Interestingly, this is a decline from over 30% of households in 2020 and is possibly a result of fewer households being comfortable evacuating to a crowded, public shelter in the context of a pandemic. Regardless of whether 25% or 30% of households plans to evacuate to a public shelter for a category 4 or 5 storm, this far exceeds the county's shelter capacity. Hurricane evacuation shelters in Hawaii are considered shelters of last resort, providing some protection for residents and visitors without a safer alternative. Most evacuation shelters across the state have not been hardened to withstand anything greater than a severe tropical storm.

*Additional planning is needed with ESF-6 mass care partners to determine how to accommodate the number of residents who plan to evacuate to a public shelter during a major hurricane event. While household perception of the safety of hurricane shelters was not assessed, the data suggests that there is a misconception regarding the safety of these facilities for shelter purposes. Further education is needed statewide on sheltering-in-place versus evacuating to public shelters to ensure that those who can safely shelter-in-place do so and allow for limited public shelter space to be used by those who most need it. To further reduce demand for sheltering, especially during major hurricane events, the state should consider pursuing tax incentives for households and businesses who choose to harden their homes/facilities.*

8. The percentage of households that require some type of assistance during an emergency (e.g. ADA accommodations, refrigeration for essential medication, electricity for a medical device, caregiving assistance for a disability or illness, paratransit service, or a hospital/home care bed) increased from 17% in 2019 to 24% in 2022. This change was not statistically significant, but is a trend that should be carefully monitored by emergency management officials as assisting these households during emergencies requires an enormous amount of resources that will be in limited supply and have many competing demands.

*Due to the serious vulnerability of these residents during a disaster—especially if utilities, transportation, and/or health care services are impacted by the event—further planning is necessary statewide to ensure that the needs of these residents can be supported during an emergency. Specific preparedness guidance should be developed for this population, which provides clear information on what resources and services are available in Hawaii's designated evacuation shelters so that families can better plan for their needs. Statewide messaging regarding household preparedness for these unique needs should be developed.*

9. Five years after the state increased the emergency preparedness recommendation from a 7-day to a 14-day supply of food and water for all Hawaii households, we have not observed statistically significant increases in the percentage of households who meet the recommendation. As of July 2022, only 16% of Kauai households have a 14-day supply of both food and water in their emergency kit.

*The state and counties should continue to conduct educational campaigns to increase awareness of the 14-day recommendation, including practical solutions to barriers identified by residents. Messaging that increases the sense of urgency about household level preparedness, including realistic timeliness for state and federal response to a disaster in Hawaii, could increase compliance by helping households understand the importance and prioritize the acquisition of supplies. For some households, however, the barriers to putting together this level of supplies are too significant to overcome. To close the gap, emergency management and response partners should consider developing public/private partnerships to establish community emergency supply caches or other creative solutions to augment emergency resources that could be immediately available at the community level post-disaster.*

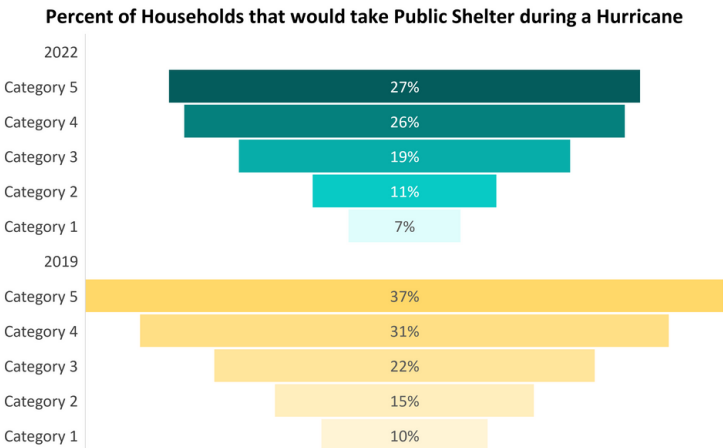


Figure 12. Percent of households that would evacuate to a public shelter for each category of hurricane for 2022 (n=176) and 2019 (n=186).

## Limitations

CASPER methodology is based on the systematic selection of households within randomly selected census blocks. For the purposes of the 2022 Kauai CASPER, 2020 U.S. Census Bureau data was used as the most recent data available. The island of Kauai has experienced some growth since the 2020 census was conducted. Changes to the overall number, composition, and geographic location of occupied housing units is not reflected in the data used for census block and household selection processes.



Survey teams had to replace some systematically selected households after three attempts with no answer, household refusal, household inaccessibility, or household ineligibility (not a Kauai resident). Replacement of selected households could affect the representativeness of the data.

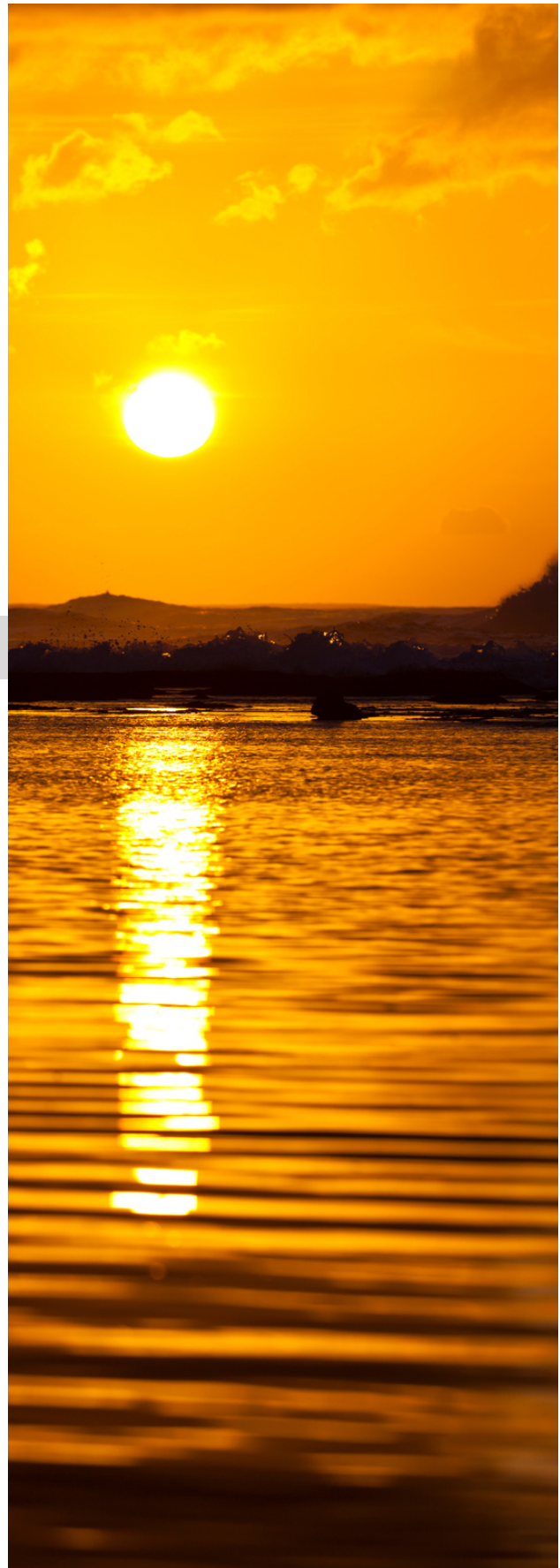
Certain high-risk groups, particularly houseless individuals and those living in congregate settings such as long-term care and correctional facilities, are excluded by CASPER's census block and household selection method. These individuals have greater resource needs and potentially different barriers to testing, vaccination, and evacuation than those living in residential settings better captured by census block data. Emergency planners should take this into account when using this data to inform planning efforts and emergency response operations.

Finally, we understand that the public's concern about getting sick with COVID-19 and masking habits may have changed frequently throughout the course of the pandemic. Neither the April 2020 CASPER nor the July 2022 CASPER were conducted during a surge or peak in COVID-19 cases. Therefore, we might have observed different responses to these questions if a CASPER had been conducted during Kauai's Delta or Omicron surges.

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Images were accessed through the Kauai District Health Office's Canva subscription service.





# APPENDIX A

To be completed by team BEFORE the interview										
Date (MM/DD/YY):	Cluster Number:	Survey Number:								
Interview Team Members:										
First, we would like to ask about basic household information.										
<p><b>Q1.</b> Including yourself, how many people live in your household? _____</p> <p>How many of those people are:</p> <table border="1"> <tr> <td>Less than 2 years old</td> <td></td> </tr> <tr> <td>Between 2-17 years old</td> <td></td> </tr> <tr> <td>Between 18-65 years old</td> <td></td> </tr> <tr> <td>More than 65 years old</td> <td></td> </tr> </table> <p> <input type="radio"/> DK  <input type="radio"/> Refused         </p>	Less than 2 years old		Between 2-17 years old		Between 18-65 years old		More than 65 years old		<p><b>Q4.</b> Do you or any of your household members require the following assistance during an emergency? (check all that apply)</p> <p> <input type="radio"/> ADA accessible accommodations (wheelchair, assistance for blindness, deafness, etc.)  <input type="radio"/> Electricity for a medical device  <input type="radio"/> Refrigeration for essential medication  <input type="radio"/> Caregiving assistance due to a disability/illness  <input type="radio"/> Hospital/home care bed  <input type="radio"/> Paratransit service  <input type="radio"/> Other _____  <input type="radio"/> None of the above  <input type="radio"/> DK  <input type="radio"/> Refused         </p> <p><b>Q4.a</b> If yes, how prepared are you to care for your household member(s) that require assistance during an emergency?</p> <p> <input type="radio"/> Very prepared  <input type="radio"/> Somewhat prepared  <input type="radio"/> Not prepared  <input type="radio"/> DK  <input type="radio"/> Refused         </p>	<p><b>Q5.</b> Is there an adult in your household who does not speak English?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q5.a</b> If yes, what language(s) do they speak? _____</p>
Less than 2 years old										
Between 2-17 years old										
Between 18-65 years old										
More than 65 years old										
<p><b>Q2.</b> Does your household own or rent this residence?</p> <p> <input type="radio"/> Own  <input type="radio"/> Rent  <input type="radio"/> Other _____  <input type="radio"/> DK  <input type="radio"/> Refused         </p>		<p><b>Q6.</b> Which range best describes your annual household income from all sources (before taxes) in 2021?</p> <p> <input type="radio"/> Less than \$25,000  <input type="radio"/> \$25,000 to less than \$40,000  <input type="radio"/> \$40,000 to less than \$70,000  <input type="radio"/> \$70,000 to less than \$100,000  <input type="radio"/> \$100,000 to less than \$150,000  <input type="radio"/> \$150,000 or more  <input type="radio"/> DK  <input type="radio"/> Refused         </p>								
<p><b>Q3.</b> Is anyone in your household pregnant?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>										
Next, we would like to ask you about your household's emergency and evacuation plans.										
<p><b>Q7.</b> Does your household have the following emergency plans?</p> <p>a. Communication plan (such as a list of numbers and a designated out-of-town contact)</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p>b. Designated meeting place immediately outside your home or close by in your neighborhood</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p>c. Copies of important documents in a safe location (e.g. water proof container)</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>	<p><b>Q9.</b> Does your household currently have enough water stored for 3 days? (assuming 1 gallon/person/day)</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q9.a</b> If yes, enough water stored for 7 days?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q9.b</b> If yes, enough water stored for 14 days?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>	<p><b>Q12.</b> What main barrier does your household face in assembling an emergency kit? (select one best answer)</p> <p> <input type="radio"/> Cost of assembling kit  <input type="radio"/> Lack of storage space for kit  <input type="radio"/> Lack of knowledge regarding what is needed in a kit  <input type="radio"/> Lack of time to shop for and assemble kit  <input type="radio"/> Other _____  <input type="radio"/> No barrier (household has kit assembled)  <input type="radio"/> No barrier (household hasn't gotten around to it)  <input type="radio"/> DK  <input type="radio"/> Refused         </p>								
<p><b>Q8.</b> Does your household have the following emergency supplies?</p> <p>a. Emergency supply kit (including water, food, flashlights, extra batteries, etc.)</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p>b. A first aid kit</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p>c. An emergency generator</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p>d. An emergency radio</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>	<p><b>Q10.</b> Does your household have enough non-perishable food (canned goods, dried fruit, protein bars) for 3 days?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q10.a</b> If yes, enough non-perishable food for 7 days?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q10.b</b> If yes, enough non-perishable food for 14 days?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>									
	<p><b>Q11.</b> Does anyone in your household require daily prescription medications?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q11.a</b> If yes, does your household have a 7-day supply of medication for all who need it?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p> <p><b>Q11.b</b> If yes, a 14-day supply of medication for all who need it?</p> <p> <input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused         </p>									

<p><b>Q13.</b> If Kauai was threatened by a hurricane, where would your household seek shelter for each category of storm?</p> <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 15%;">Shelter in place (at home)</th> <th style="width: 15%;">Friend/ family's home</th> <th style="width: 15%;">Public shelter</th> <th style="width: 15%;">Other (specify)</th> <th style="width: 10%;">DK</th> <th style="width: 10%;">Refused</th> </tr> </thead> <tbody> <tr> <td><b>Hurricane Category (wind speeds)</b> 1 (75-95 mph)</td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>2 (96-110 mph)</td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>3 (111-129 mph)</td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>4 (130-156 mph)</td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>5 (157+ mph)</td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		Shelter in place (at home)	Friend/ family's home	Public shelter	Other (specify)	DK	Refused	<b>Hurricane Category (wind speeds)</b> 1 (75-95 mph)							2 (96-110 mph)							3 (111-129 mph)							4 (130-156 mph)							5 (157+ mph)							<p><b>Q18.</b> Have you or anyone in your household signed up to receive weather and other disaster-related alerts?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Yes</li> <li><input type="radio"/> No</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>
	Shelter in place (at home)	Friend/ family's home	Public shelter	Other (specify)	DK	Refused																																					
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5 (157+ mph)																																											
<p><b>Q14.</b> Does your household have hurricane/ high wind insurance?</p> <p><input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused</p>	<p><b>Q17.</b> What main barrier might prevent your household from evacuating for a natural disaster when advised to do so? (select one best answer)</p> <ul style="list-style-type: none"> <li><input type="radio"/> Concern about leaving property vacant</li> <li><input type="radio"/> Lack of transportation</li> <li><input type="radio"/> Uncertainty about where to go</li> <li><input type="radio"/> Health or mobility issues</li> <li><input type="radio"/> Concern about leaving pet(s)</li> <li><input type="radio"/> Inconvenient or expensive</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> No barriers (household will evacuate)</li> <li><input type="radio"/> No barriers (household would choose not to evacuate)</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																										
<p><b>Q15.</b> For many tsunami events, officials may not be able to open tsunami refuge areas or evacuation shelters. If you are in a tsunami evacuation zone when a tsunami warning is issued, what action would you take?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Evacuate inland to higher ground</li> <li><input type="radio"/> Ignore evacuation order</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>	<p><b>Q19.</b> Is your household familiar with the Kauai Emergency Management Agency's website (<a href="http://www.kauai.gov/kema">www.kauai.gov/kema</a>) where you can access materials to better prepare for emergencies?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Yes</li> <li><input type="radio"/> No</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																										
<p><b>Q16.</b> Are you familiar with the tsunami evacuation zones on Kauai?</p> <p><input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused</p> <p><b>Q16.a</b> If no, do you know where to find that information?</p> <p><input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused</p>																																											
<p><b>Next, we would like to ask you about the COVID-19 pandemic.</b></p>																																											
<p><b>Q20.</b> How concerned are you about your household members getting sick with COVID-19?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Very concerned</li> <li><input type="radio"/> Somewhat concerned</li> <li><input type="radio"/> Not concerned</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>	<p><b>Q23.</b> How concerned are you about your household's ability to pay the next month's rent or mortgage?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Very concerned</li> <li><input type="radio"/> Somewhat concerned</li> <li><input type="radio"/> Not concerned</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																										
<p><b>Q21.</b> Have you or anyone in your household experienced emotional distress related to the COVID-19 pandemic?</p> <p><input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused</p> <p><b>Q21.a</b> If yes, has anyone in your household sought mental/behavioral support services?</p> <p><input type="radio"/> Yes   <input type="radio"/> No   <input type="radio"/> DK   <input type="radio"/> Refused</p>	<p><b>Q24.</b> Hawaii's indoor mask mandate ended in late March 2022. How important do you think it is to continue to wear a mask indoors in places other than your home?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Very important</li> <li><input type="radio"/> Somewhat important</li> <li><input type="radio"/> Not important</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																										
<p><b>Q22.</b> How does your household income now compare with what it was before the pandemic?</p> <ul style="list-style-type: none"> <li><input type="radio"/> A lot less</li> <li><input type="radio"/> A little less</li> <li><input type="radio"/> About the same</li> <li><input type="radio"/> A little more</li> <li><input type="radio"/> A lot more</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																											

<p><b>Q25.</b> Which of the following community resources has your household received during the pandemic? (check all that apply)</p> <ul style="list-style-type: none"> <li><input type="radio"/> Food distribution programs</li> <li><input type="radio"/> Unemployment benefits</li> <li><input type="radio"/> WIC/SNAP/Da Bux</li> <li><input type="radio"/> Rent/utilities assistance</li> <li><input type="radio"/> Mortgage forbearance</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> None of the above</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>	<p><b>Q26.</b> On a scale of 1-5, with 1 being very poor and 5 being very good, how would you rate Kauai's response to the pandemic in the following areas:</p> <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>DK</th> <th>Refused</th> </tr> </thead> <tbody> <tr> <td>Policies &amp; Regulations (mask mandates, gathering/travel restrictions, etc.)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Health-directed isolation &amp; quarantine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Case investigation &amp; contact tracing</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>COVID-19 testing availability</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>COVID-19 vaccine rollout &amp; availability</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>COVID-19 Public Information</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		1	2	3	4	5	DK	Refused	Policies & Regulations (mask mandates, gathering/travel restrictions, etc.)								Health-directed isolation & quarantine								Case investigation & contact tracing								COVID-19 testing availability								COVID-19 vaccine rollout & availability								COVID-19 Public Information							
	1	2	3	4	5	DK	Refused																																																		
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COVID-19 vaccine rollout & availability																																																									
COVID-19 Public Information																																																									
<p style="text-align: center;"><b>Finally, we would like to ask you about COVID-19 vaccines.</b></p>																																																									
<p><b>Q27.</b> COVID-19 vaccines are available to all Kauai residents 6 months of age and older, with vaccines only recently being authorized for those 6 months through 4 years. For your household members under the age of 5, did you already get them vaccinated?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Yes, right away/have an appointment</li> <li><input type="radio"/> Not yet, but I plan to make an appointment</li> <li><input type="radio"/> No, do not plan to vaccinate</li> <li><input type="radio"/> N/A</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>	<p><b>Q30.</b> For vaccinated household members, what was the most important reason they chose to get vaccinated?</p> <ul style="list-style-type: none"> <li><input type="radio"/> To protect ourselves</li> <li><input type="radio"/> To protect loved ones/the community</li> <li><input type="radio"/> To gather safely with friends and family</li> <li><input type="radio"/> To travel again</li> <li><input type="radio"/> To improve our financial outlook</li> <li><input type="radio"/> To meet work or other requirement (e.g. school, sport, event, etc.)</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> <li><input type="radio"/> N/A – No vaccinated hh members</li> </ul>	<p><b>Q31.</b> For unvaccinated household members, what was the most important reason why they chose not to get vaccinated?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Safety concerns</li> <li><input type="radio"/> Side effects</li> <li><input type="radio"/> Trust issues</li> <li><input type="radio"/> Vaccine is not effective enough</li> <li><input type="radio"/> Inconvenient to receive it</li> <li><input type="radio"/> Don't feel it's needed</li> <li><input type="radio"/> Ineligible</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> <li><input type="radio"/> N/A – All hh members are vaccinated</li> </ul>																																																							
<p><b>Q28.</b> Have your household members 5 years and older received at least one dose of a COVID-19 vaccine?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Yes, all of them</li> <li><input type="radio"/> Some of them</li> <li><input type="radio"/> None of them</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> </ul>																																																									
<p><b>Q29.</b> Is anyone in your household vaccinated but has not yet received their booster dose(s)? If so, what is the primary reason?</p> <ul style="list-style-type: none"> <li><input type="radio"/> Safety concerns</li> <li><input type="radio"/> Side effects</li> <li><input type="radio"/> Trust issues</li> <li><input type="radio"/> Vaccine is not effective enough</li> <li><input type="radio"/> Inconvenient to receive it</li> <li><input type="radio"/> Don't feel it's needed</li> <li><input type="radio"/> Ineligible</li> <li><input type="radio"/> Other _____</li> <li><input type="radio"/> DK</li> <li><input type="radio"/> Refused</li> <li><input type="radio"/> N/A – All hh members are boosted</li> </ul>																																																									



## APPENDIX B



### DEPARTMENT OF HEALTH

DAVID Y. IGE  
GOVERNOR

ELIZABETH A. CHAR, MD  
DIRECTOR

**FOR IMMEDIATE RELEASE**

July 12, 2022

22-086

### **Kaua'i District Health Office to conduct survey to assess COVID-19 response efforts & emergency preparedness**

LIHUE – The Department of Health's (DOH) Kaua'i District Health Office will conduct a Community Assessment for Public Health Emergency Response (CASPER) survey to assess the community's perception of Kaua'i's COVID-19 response efforts and current emergency preparedness level.

"The responses will help us understand the community's perception of our COVID-19 response efforts over the past two years and build upon prior CASPER surveys," said Lauren Guest, Deputy District Health Officer, Kaua'i District Health Office. "We greatly appreciate the participation of Kaua'i residents in this island-wide survey effort that enables the Kaua'i District Health Office to meet our community's needs before, during, and after a disaster."

Survey teams will go door-to-door July 26-29 to 30 census tracts that are weighted towards more populated areas within the county. Seven houses within each tract will be selected to survey. Survey teams are comprised of DOH staff with support from the Kaua'i Medical Reserve Corps, and the American Red Cross.

The survey takes about 10 minutes and selected households will be asked about the ongoing impacts of the pandemic, their perception of Kaua'i's COVID-19 response efforts, their emergency preparedness supply levels, and evacuation plans following a disaster. All survey responses will be confidential, and survey teams will not collect names or addresses.

Team members will carry identification cards and wear vests identifying themselves as part of the DOH survey team. Survey teams will wear face masks and physical distancing will be observed. Participating households may also complete the survey by phone.

The CASPER survey methodology was developed by the Centers for Disease Control and Prevention to rapidly assess the health and other resource needs of a community after a disaster.

This will be the Department of Health's fifth CASPER survey conducted on Kaua'i. View prior CASPER survey reports, at: <https://health.hawaii.gov/kauai/>

###

## APPENDIX C

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
KAUAI DISTRICT HEALTH OFFICE  
3040 UMI STREET  
LIHUE, HAWAII 96766

ELIZABETH A. CHAR, M.D.  
DIRECTOR OF HEALTH

JANET M. BERREMAN, M.D., M.P.H., F.A.A.P.  
DISTRICT HEALTH OFFICER

### Community Assessment for Public Health Emergency Response

Hello, we are \_\_\_\_\_ and \_\_\_\_\_ with the Department of Health. We have some information we would like to leave with you related to emergency preparedness and COVID.

We are also doing a survey to help us understand our community's perception of our COVID response efforts as well as the current preparedness level for hurricanes and other disasters. Your house was randomly selected to participate, and the survey will take about 10 minutes. The survey may be conducted by phone if you prefer. It is completely anonymous — we will not collect your name or address. Do you have a few minutes to complete the survey?

*[WAIT FOR RESPONDENT TO CLEARLY ANSWER **YES** OR **NO**].*

*[IF **NO**, THANK THEM FOR THEIR TIME.]* Thank you very much for your time. Here is some information you might find useful.

*[IF **YES**, CONTINUE.]* Thank you so much. Would you prefer to conduct the survey outside practicing physical distancing or over the phone?

*[IF **IN-PERSON**, MAKE SURE TO OBSERVE A 6-FOOT DISTANCE AT ALL TIMES & OFFER THEM A MASK, IF NEEDED]*

*[If **OVER THE PHONE**, GIVE THEM A PAPER COPY OF THE SURVEY & YOUR TEAM'S ASSIGNED PHONE NUMBER—RETURN TO THE CAR AND AWAIT THEIR CALL]*

*If they would like confirmation that you were sent by the Hawaii State Department of Health, please call **Lauren Guest**, Deputy District Health Officer at **808- 241-3555**.*

## APPENDIX D

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
KAUAI DISTRICT HEALTH OFFICE  
3040 UMI STREET  
LIHUE, HAWAII 96766

ELIZABETH A. CHAR, M.D.  
DIRECTOR OF HEALTH

JANET M. BERREMAN, M.D., M.P.H., F.A.A.P.  
DISTRICT HEALTH OFFICER

### Community Assessment for Public Health Emergency Response (CASPER) Survey to Assess Kauai's Perception of our COVID-19 Response and Emergency Preparedness

Aloha,

The Kauai District Health Office is conducting a survey to help us understand our community's perception of our COVID response efforts as well as the current preparedness level for hurricanes and other disasters. Your household is one of 210 randomly selected island-wide to participate. The survey will take about 10 minutes of your time. It is completely anonymous — we will not collect your name or address.

We stopped by while you were out of the house, but we really need your participation. The information gathered will help us to improve how DOH responds to future emergencies.

You can complete the survey over the phone or in a physically distanced outdoor interview.

Please call \_\_\_\_\_ to:

- 1) complete your interview,
- 2) schedule a time for the survey team to stop by again, or
- 3) let us know that you do not wish to participate

If we do not hear back from you, we will stop by again to see if we can reach you.

Thank you for your consideration,

*Janet Berreman*

**Janet M. Berreman, MD, MPH, FAAP**  
Kauai District Health Officer

If you have questions regarding this survey, please call Lauren Guest, Deputy District Health Officer, at 808-241-3555.



## APPENDIX E

# COVID-19 CASPER PROTOCOL



1



### FOLLOW PROPER SAFETY MEASURES

Wear your mask when driving and approaching households. Use provided hand sanitizer and gloves.

2



### KNOCK ON SELECTED HOUSEHOLD'S DOOR

Attempt households three times before replacing, unless the home is inaccessible or vacant.

3



### BACK UP TO MAINTAIN PHYSICAL DISTANCING

Maintain at least 6 feet of distance between yourself and selected households while interviewing.

4



### OBTAIN VERBAL CONSENT TO SURVEY

Similar to other surveys introduce yourself and ask if the household is willing to participate in the survey.

5



### OFFER TO COMPLETE SURVEY VIA PHONE

If the household prefers, provide the team's phone number and conduct the survey from the car.

6



### PROVIDE FOLLOW UP INFORMATION

If a household does not answer the door, leave a follow up form with your team's phone number.

Kauai District Health Office



Questions? 808-241-3555

# APPENDIX F



## Hawaii CASPER Interview Tips



### BEFORE THE INTERVIEW

- Practice with your partner
- Dress appropriately: comfortable clothing; closed-toed shoes; vest & ID
- Assign roles (e.g. driving, navigating, interviewing, etc.)

### DURING THE INTERVIEW

- Introduce yourself
- Show empathy and respect
- Remind respondents that their responses are confidential and participation voluntary

### ENDING THE INTERVIEW

- Look over the entire questionnaire for completeness
- Thank the respondent and provide pre-filled blue backpack
- Complete referral form when necessary

### DOS AND DON'TS OF STANDARDIZATION

- **DO** ask the questions in the **same order** with the **exact wording**
- **DO** read the entire question
- **DO** record answers verbatim
- If respondent needs clarification, **repeat the question first**. If he/she still needs clarification, make sure that you are not changing the nature of the question.
- **DON'T** rephrase questions
- **DON'T** pre-fill answers
- **DON'T** try to finish the respondent's sentences

### TRACKING FORM

- Used for tracking **every** household sampled (this means every house you attempt an interview at)
- Each cluster collected on a separate tracking form
- Allows for calculation of response rates - it is **very important** that it is correct and complete
- If necessary, write information to identify households to return to or any notes that you may need to take (e.g., why the household is inaccessible) on the back of the form

### SYSTEMATIC SAMPLING OF HOUSEHOLDS

- Begin surveying at random starting point in cluster
- If specific interview addresses are not provided, select the nearest house and begin counting
- When you reach your first nth house (calculated by dividing households in cluster by 7), attempt an interview
- Complete tracking form **at every nth house** to indicate if interview was successful or if another attempt/replacement is needed
- Continue in serpentine manner, stopping at every nth house
- **Apartments/Condos/High Rises:** Count each apartment and condo units as individual houses
- **Commercial Buildings/Hotels:** Do not count commercial buildings or hotels when counting every nth house - these are not eligible for CASPER participation
- **Replacement:** Households can only be replaced if they meet one or more of the following categories:
  - 1) inaccessible,
  - 2) vacant,
  - 3) household refuses, or
  - 4) three attempts have been made with no answer

[Call OPS with questions related to sampling or replacement.](#)

### SURVEY TIPS

#### Paper Survey Forms

- Ensure before departing after every interview that questionnaire form is complete (including administrative information at top of each form)

### SURVEY TIPS

#### All Forms

- Begin survey following verbal consent
  - If household not accessible or refuses, note on tracking sheet (if refusal, provide important document bag to household)
- Note which survey number corresponds to which household on tracking sheet
- If helpful, present survey (on tablet or paper) to households to read along with survey team
- Indicate any issues on tracking form for review

### SURVEY TIPS

#### Electronic Survey Forms

- Ensure tablets are charged before departure
  - Tablet passcode: 101010
  - Electronic application: EpiCollect 5
- Save each survey entry following completion
- Upload data upon return to command center each day

Questions or concerns? Contact OPS: 808-241-3555.

# APPENDIX G

## Community Assessment for Public Health Emergency Response (CASPER) Tracking Form

County: \_\_\_\_\_ Cluster # (1-30): \_\_\_\_\_ Houses in the Cluster: \_\_\_\_\_ Team: \_\_\_\_\_ Date of Interview: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Instructions: Use one tracking form per cluster. Check where appropriate, but try to choose only one best option for each of the three categories.

Household Number	1	2	3	4	5	6	7	8	9	10	11	12
Survey Number (from questionnaire)												
<b>Access</b>												
House inaccessible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Answer</b>												
Appears vacant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No answer after (indicate time)	First visit <input type="checkbox"/>	Second Visit <input type="checkbox"/>	Third visit <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Interview</b>												
Interview Completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refused to participate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ineligible to participate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partial interview completed (indicate return time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"Come back later" (indicate return time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Translator needed (specify language)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*REMINDER: You should not pass this line representing 7 selected (and interviewed) houses unless you replaced a household.

### Houses are only eligible for replacement if:

- 1) House is inaccessible (due to locked gate, vicious dogs, damage to property, etc.)
- 2) House appears vacant (nobody lives here anymore)
- 3) Household refuses to participate
- 4) No one is home after three attempts made at least one hour apart
- 5) Household is not eligible to participate (e.g. tourist—to be eligible, they should live here at least 4 months of the year)